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ABSTRACT

The National Assessment of Educational Progress (NAEP) evaluated the writing ability of American students in 1974, 1979, and 1984. Data from 95,000 students were examined for trends over this 10-year period. Writing tasks, including informative, persuasive, and literary or imaginative writing were administered to national samples of students aged 9, 13, and 17. The results indicated that, in general, achievement in 1984 seemed to be no better than it was in 1974. Achievement trends for Black, Hispanic, and White subgroups, as well as those defined by geographic region or sex, were similar to nationwide trends. From 1979 to 1984, students' writing skills showed improvement, particularly at ages 13 and 17. However, achievement remained low in 1984; only 38 percent of the 17-year olds produced a well-organized and detailed descriptive essay, and only 20 percent wrote an effective persuasive letter. Imaginative writing improved for all ages. Results also indicated that although greater attention was focused on writing instruction in 1984 than in 1974, the actual amount of writing done by students remained about the same. Data tables, graphs, a summary of NAEP procedures, and students' writing samples showing different levels of expertise are included. (GDC)

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WRITING

Trends Across the Decade, 1974-84

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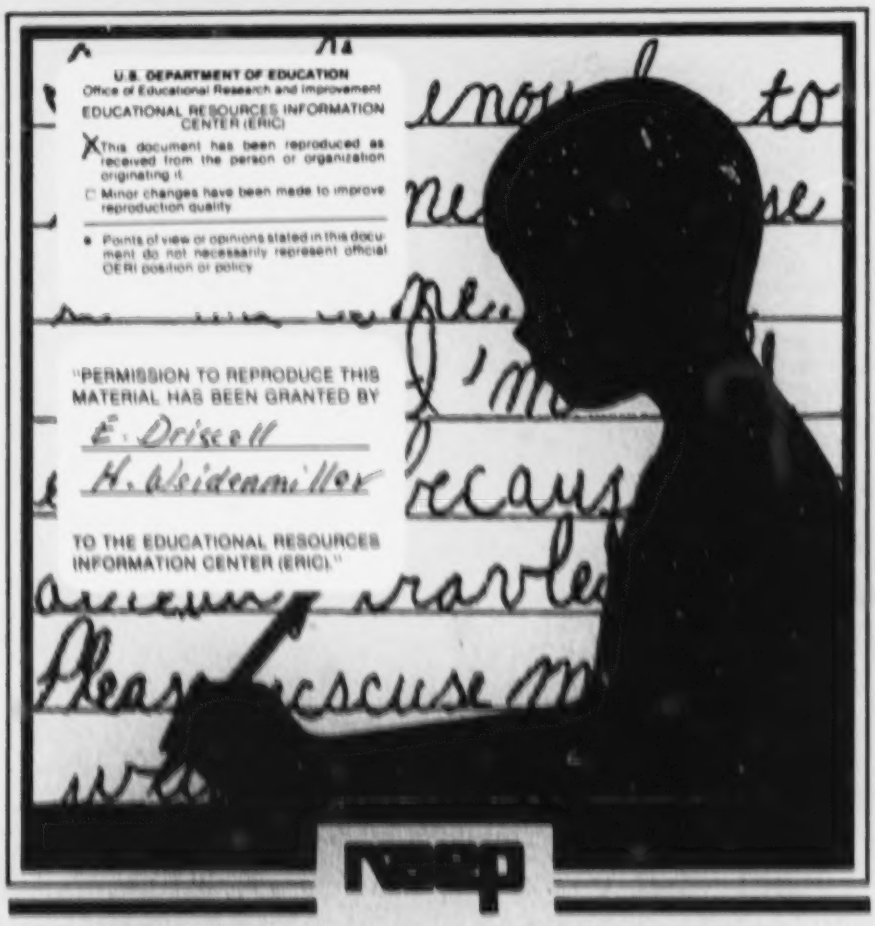
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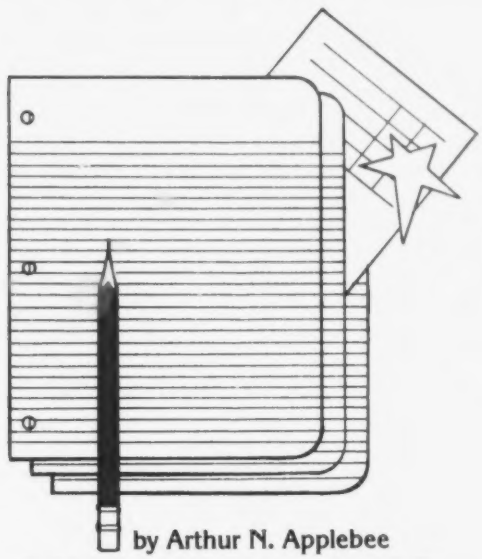
WRITING

Trends Across the Decade, 1974-84



by Arthur N. Applebee
Judith A. Langer Ina V. S. Mullis

Report No: 15-W-01

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The National Assessment of Educational Progress is funded by the Office for Educational Research and Improvement, Center for Statistics, under a grant to Educational Testing Service. National Assessment is an education research project mandated by Congress to collect data over time on the performance of young Americans in various learning areas. It makes available information on assessment procedures to state and local education agencies.

"True ease in writing comes from art, not chance,
As those move easiest who have learn'd to dance.
'Tis not enough no harshness gives offense,
The sound must seem an echo to the sense."

Alexander Pope
An Essay on Man, 1733

Two conclusions flow readily from the NAEP data on writing:

- American students are writing no better in 1984 than they were ten years earlier.
- Performance of these 9-, 13- and 17-year-old students is distressingly poor.

If one accepts the assumption that a piece of writing is a reflection of how the writer THINKS, then the problem seems even more serious.

The young authors who took part in these assessments were asked to perform three kinds of writing: writing to inform others, writing to persuade, and writing to demonstrate their powers of imagination.

It is difficult to imagine paths to personal or career success in our society that do not require one or more of these abilities. And only 20 percent of our in-school 17-year-olds were able to do an adequate job of persuasion in 1984.

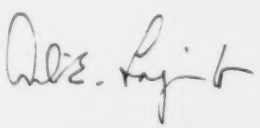
This report also suggests some bright spots:

- The trends since 1979 are generally up.
- Increasing amounts of time are being devoted to writing instruction.

America's schools and teachers tend to be responsive. The current interest in excellence generally, and in writing particularly, is generating positive reaction. If the momentum evidenced in these data during the last five years of the decade can be continued, we may be on the way to solid improvement.

It is easy to suggest that now it is up to the writing experts and the researchers to come up with suggestions and recommendations. But we all know the context in which any solutions must be implemented. Significant resources are required to train teachers adequately and to support the expensive effort necessary to read and comment on thousands of student essays every school day.

We all share the responsibility for valuing good writing and for encouraging the pursuit of excellence in this increasingly important skill. Our hope is to have as many of our young people as possible achieve "true ease in writing."



Archie E. Lapointe
Executive Director

The cover illustration by Jack Weaver includes a writing sample by a 9-year-old student.

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Chapter 1

A Focus on Writing: Trends in Three National Assessments

This report is based on three assessments of writing achievement conducted from 1974 to 1984. The assessments took place during the school years ending in 1974, 1979, and 1984. Each of the assessments involved nationally representative samples of 9-, 13-, and 17-year-old students responding to a variety of writing tasks. Data from 95,000 students are available for the examination of trends. The students sampled were chosen in such a way that the results of their assessment can be generalized to the national population.

NAEP designed the writing tasks to reflect the differing purposes for which people write at home, at school, and in the community. In an attempt to assess students' ability to accomplish various types of writing, the tasks in the assessment included three major purposes for writing: informative, persuasive, and imaginative. The papers were evaluated to reflect students' success in accomplishing the specific purpose of each writing task as well as their overall writing fluency.

The present report focuses on trends in writing achievement and instruction over the 10-year period and is confined to results of writing exercises that were administered using identical procedures in at least two of the three assessments. The discussion of trends in writing performance is therefore limited to a rather small data set of three to five writing tasks at each age level. Despite the limited number of tasks, the results from nationally representative samples of students participating in directly comparable assessments at different points in time are useful in examining whether students' writing skills are changing and, if so, in what respect. (A later report will be based on the entire set of writing tasks and questions about writing instruction that were administered in NAEP's 1984 writing assessment.)

The present report describes trends in writing achievement in two ways. One set of analyses is based on **primary trait** scoring and focuses on the writers' effectiveness in accomplishing the particular task that was set; it is sensitive to the writers' understanding of audience, as well as to the inclusion of specific features necessary to accomplish the purpose of each informative, persuasive, or imaginative writing task. The other set of analyses is based on **general impression** or **holistic** scoring and focuses on the writers' overall fluency in responding to each particular writing task; it is sensitive to a range of different skills, including organization, quality of content, grammar and usage, spelling, punctuation, and choice of words to express an idea.

The following section highlights the major findings, which are discussed in detail in succeeding chapters. Further details of the development of the writing assessment, sampling procedures, analyses, and results are included in the Procedural and Data Appendices.

Summary of Trends, 1974-84

- Across the 10-year period from 1974 to 1984, the three age groups showed somewhat different patterns of writing achievement. The performance of 17-year-olds generally declined in the first part of the decade and rose in the second part. Thirteen-year-olds showed mixed trends between 1974 and 1979, but improved their writing performance from 1979 to 1984. During the same 10-year period, 9-year-olds showed a less consistent pattern of changes in writing performance, improving on some writing tasks but declining on others. Although the recent improvements are encouraging, achievement in 1984 seems to be no better than it was 10 years earlier.

- Across the 10-year period from 1974 to 1984, trends in student achievement in writing were much the same for many population subgroups.

  - At all three ages, Black and Hispanic students generally showed lower writing achievement levels than White students, however, trends for these three groups of students were similar. At ages 13 and 17, Black, Hispanic, and White students showed relatively parallel trends in performance, with inconsistent trends or declines between 1974 and 1979 and gains from 1979 to 1984.

  - At age 9, Hispanic students showed consistent improvement on the NAEP writing tasks over the decade, while both Black and White 9-year-olds showed more varied results.

  - Trends in achievement for subgroups defined by region of the country and sex followed patterns similar to national trends.

- Across the most recent five-year period (from 1979 to 1984), students' writing skills showed improvement, particularly at ages 13 and 17.

  - On tasks requiring informative or persuasive writing, 13- and 17-year-olds showed improvement. Levels of achievement on these tasks, however, remained low even in 1984; only 38 percent of the 17-year-olds produced a detailed and well-organized description, and only 20 percent wrote an effective persuasive

letter. Nine-year-olds showed little improvement on an informative writing task and experienced a decline on a persuasive writing task.

- On an imaginative writing task, 9-year-olds' performance improved significantly during this same period. The imaginative writing skills of 13- and 17-year-olds improved slightly between 1979 and 1984. Even so, in 1984 only 17 percent of the 13-year-olds and 24 percent of the 17-year-olds clearly described an imaginative situation.

- Students' reports indicate that schools were giving more attention to writing instruction in 1984 than in 1974, but that the actual amount of writing students do has remained about the same.

  - The amount of time spent on writing instruction in English classes increased over the first half of the decade (1974-79) and leveled off between 1979 and 1984, according to reports from 13- and 17-year-olds. Even in 1984, however, about one-third of the 17-year-olds and two-fifths of the 13-year-olds reported receiving little or no writing instruction.

  - Increased attention to the process of writing each paper is reflected in 13- and 17-year-olds' reports of increased attention to planning, rewriting, and teacher suggestions for improvement. These increases began between 1974 and 1979 and continued between 1979 and 1984.

  - The average amount of writing reported by 17-year-olds decreased significantly between 1974 and 1979, and returned nearly to earlier levels by 1984. In 1984, 17-year-olds reported writing about four papers during a six-week period. Thirteen-year-olds wrote less frequently (about three papers in six weeks), with no significant change between 1974 and 1979—the years for which data are available.

Reflections on Trends in Writing Achievement

This 10-year trend report gives clear cause for concern about the writing proficiency of the nation's students. Despite an increased emphasis on writing at all grade levels during the decade, students in 1984 appeared to be only just regaining their 1974 levels of proficiency. Does this mean that recent reforms in writing initiated at state and local levels have been ineffectual? This seems unlikely, because the upward trend in performance since 1979 has been associated with a variety of changes in instruction. Seventeen-year-old students reported writing more in 1984 than 1979, for example, and significantly fewer students reported doing no writing at all. Further, students reported that their teachers were encouraging more planning before writing and commenting more extensively on how to improve their papers.

Contrasts between recent trends at age 9 and those at ages 13 and 17 are interesting. Between 1979 and 1984, improvements at age 9 occurred on the imaginative writing task, although proficiency on informative and persuasive tasks remained relatively stable or declined. At the older ages, performance on informative and per-

suasive tasks showed the most improvement. These patterns may reflect differing instructional emphases in elementary and secondary schools. It may be that younger children are more likely to be asked to write creatively, whereas instruction for older students may be focused more directly on academic tasks that require informative or persuasive writing.

Both of these emphases seem too limited. Elementary school children need to be engaged in informative and persuasive writing tasks appropriate to their levels of knowledge and interests, and secondary school students would benefit from the creative exploration of ideas that imaginative writing encourages.

Trends in writing achievement differ from trends in reading achievement during the same period of time.* Reading proficiency improved at all three age levels between 1971 and 1984, and there were dramatic improvements in the performance of traditionally disadvantaged subgroups. Improvements in writing proficiency have been more erratic. For advantaged and disadvantaged students alike, the proportion of competent writers remains distressingly small.

What does this suggest about schooling? For the assessment, students are not producing well-organized and detailed informative, persuasive, or imaginative papers, and this may suggest that they are not encountering such writing tasks with sufficient frequency at school. By their own reports, students do little writing in school, averaging only three or four papers over a six-week period across all their subjects. Simply writing more, in some generalized sense, however, may be insufficient to bring about significant improvements in writing performance. To move beyond the current levels of achievement, a more systematic program of instruction may be needed—one focused more directly on the variety of different kinds of writing students need to learn to do and spanning a wider range of levels of complexity.

The following chapters amplify these findings. For trend results included in the 1984 assessment, Chapter 2 presents samples of student papers and changes in achievement on the informative writing task for each age level, Chapter 3 on the persuasive writing task, and Chapter 4 on the imaginative writing task. Chapter 5 provides a discussion of the trends in writing achievement over the last decade based on assessment tasks administered using identical procedures. Chapter 6 presents information about changes in writing instruction.

The Procedural Appendix explains procedures used in assessing writing and measuring changes in writing achievement. The Data Appendix contains the detailed trend results.

**The Reading Report Card, Progress Toward Excellence in Our Schools, Trends in Reading over Four National Assessments, 1971-1984.* Educational Testing Service, 1985.

Chapter 2

Trends in Informative Writing, 1979-84

NAEP writing assessments have included tasks representative of three major purposes of writing: informative, persuasive, and imaginative. (Explanations of these purposes from NAEP's 1983-84 Writing Objectives Booklet are reproduced in the Procedural Appendix of this report.) Chapters 2 through 4 will review performance on these types of writing, presenting results for each of the several tasks included in the 1984 assessment that yielded trend information. Chapter 5 presents a summary of trends in achievement across all types of tasks that were included in earlier assessments but were not readministered in 1984.

Informative writing is used to present information and share ideas. Very young children use informative language to describe their trips to the store, to tell about their new toys, and to give voice to their new thoughts. As they get older, children learn to use informative language in new and more complex ways; it is the most frequent type of writing in school. It is the sort of writing that is used to share ideas and knowledge, including reporting about science experiments and books, describing or explaining newly researched material, presenting analyses of political and social issues, and conveying generalizations about topics of study. It includes the academic writing that students learn to do in school and that helps to identify them as educated people. Engaging in this type of writing helps students to think about ideas, to refine them, and to formulate them clearly.

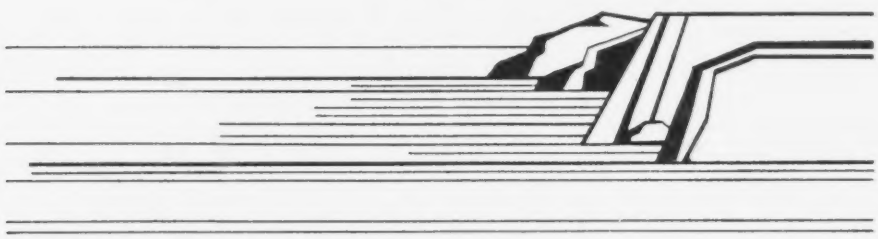
One informative writing task was given to 9-, 13-, and 17-year-olds in 1979 and again in 1984. This task presented students with a reprint of a surrealistic painting by Salvador Dali and asked them to describe it for a friend who had never seen it, so that the friend could visualize the picture.

Accomplishing the Task: Informative Writing

In order to successfully accomplish this writing task, students needed to select, organize, and present the details of the painting, and to convey them in terms of the whole painting. Responses to this task were rated as **unsatisfactory, minimal, adequate** or **elaborated,** or they were not rated.*

Unsatisfactory. Writers who were unable to respond satisfactorily to this task provided only the barest information, misinformation, or disjointed details so that the information did not fit. For example:

It was like a desert with watches laying on the ground some of the watches were on trees.



*Papers that were blank, undecipherable, off task, or contained a statement to the effect that the student did not know how to do the task were not rated.

Minimal. At the **minimal** level of performance, writers provided some details, but in unrelated ways. They created no organizational framework for the reader to use to visualize how the various parts of the picture might fit together. The following description, for example, includes a number of details, but lacks a larger organizing framework.

There is a lake in the background. Then on the right side there is a rocky edge. Then there is a dead broken off tree and on a limb there is a clock just draped over like it melted. The tree is on like box then the is a-nother clock draped over the edge of the box. Then there is a stopwatch on the box with ants on it then there is something white on the ground with a clock draped over it.

Adequate. To perform at the **adequate** level, writers needed to describe and interrelate most of the details in the picture and to present the details within an organizing framework. For example:

In the background there is a lake or ocean with a yellowish brown cliff jorting out of the still water. By the ocean there is a large blue platform. Another platform brown in color is close to you on the left side. On it ther is a orange pocket watch with black arms on it. Hanging of the edge there is a gold pocket watch with a fly on it, but the watch is melted so half of in is on the platform half is off. Right next to the gold watch there is a dead gray tree with a similer watch melting off it, but silver in color. In the midle of the picture is a melted face with a large eye (closed) with long eye lashes with a silver pocket watch melting off it.

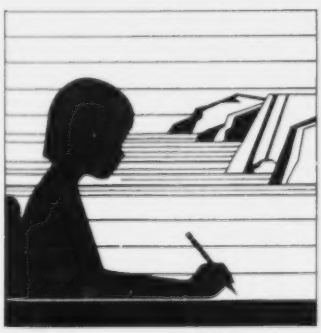
Elaborated. Writers presented **elaborated** papers when they wrote an extended description within a cohesive organizing framework—spatial, formal, thematic, metaphoric, or narrative—to provide a context for the reader. For example:

Well, it was really strange. it look kinda like a western desert to me. In the background to the right there was a cliff, and the rest was a lake. When the water came to an end a floor of sand came. Lying on the sand was a piece of decaying wood with grass growing in between it. Over this piece of wood, lay a clock but it was dropping of it like a piece of cloth. It sagged, and had folds in it. To the left of the picture there was a block the same texture as the sand, but you could only see a corner of the block the rest was not included on the picture. Hanging over the side of the block was another clock, like the one on the wood. I should mention that these clocks were like locket clocks, the kind that mayors wear on their suits, but these did not have a chain attached. Anyways, half of the clock was on top of the

Please continue on next page ►

13. (continued)

the table, the other half was hanging off. In front of the clock was another clock but this one was lying face down, so you couldn't see the hands or anything, this clock was also a normal stiff clock. On top of it were crawling ants, or some other kind of bug. In back of both clocks, a branch grew from the block. It had one arm growing from in, which another flexible clock hung over.



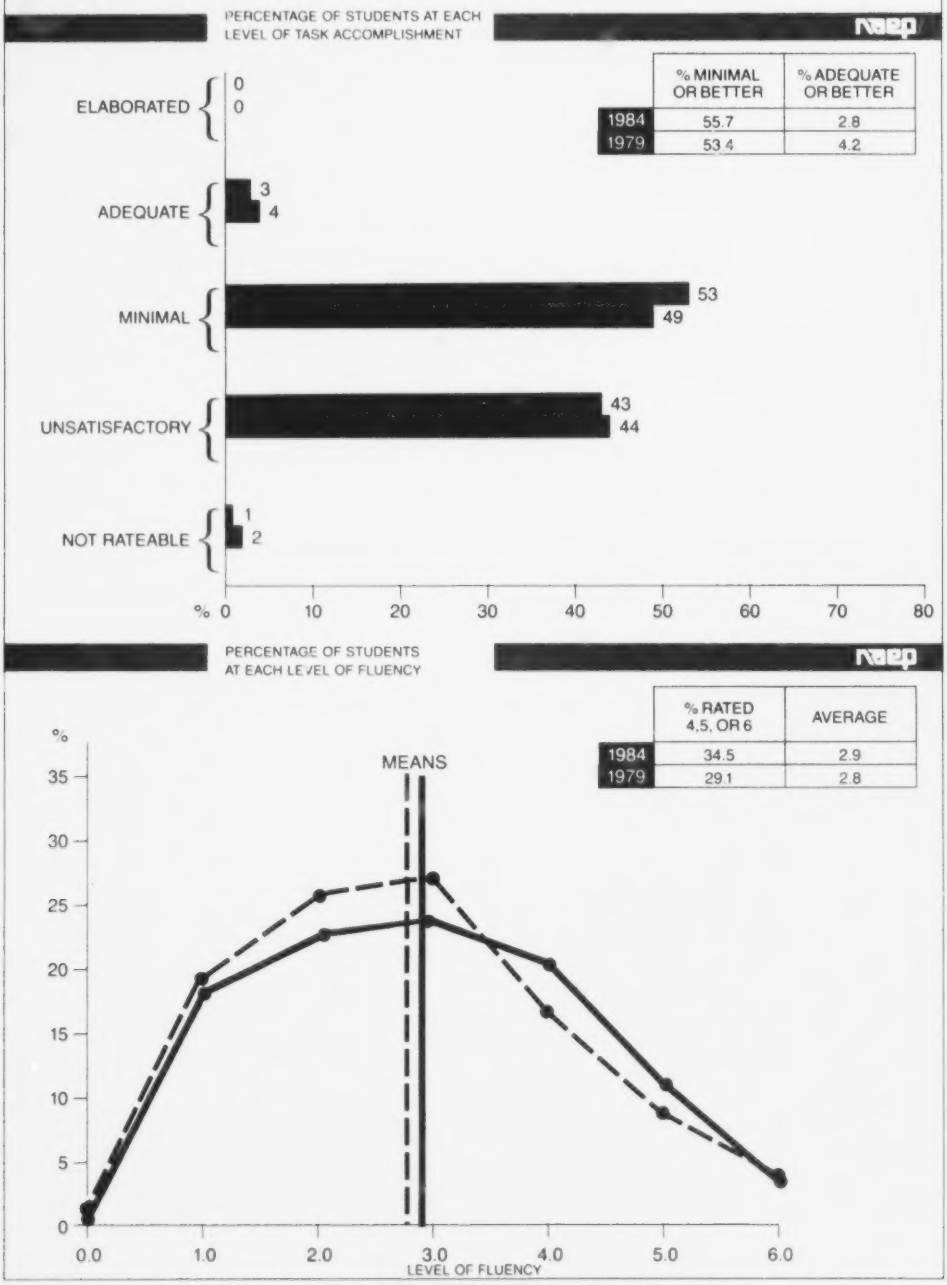
Trends in Informative Writing Achievement, 1979-84

Age 9

In 1984, as **Figure 2.1** indicates, more than half of the 9-year-olds wrote **minimal** descriptions of the painting, with only 3 percent writing **adequate** papers. Although students wrote more papers that were at least at the **minimal** level than in 1979, the changes in levels of performance were slight. No students in this younger age group presented an **elaborated** description.

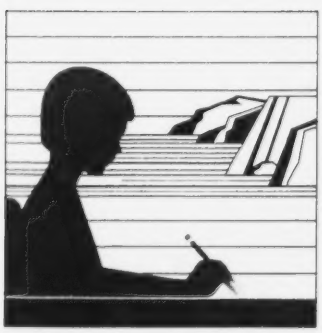
There was also a slight improvement in overall fluency on this task. The distribution shifted slightly up the scale, with 5 percent more students writing better papers (4, 5, or 6 on the fluency scale) in 1984 as compared with 1979. As with the results for level of task accomplishment, however, changes in fluency were relatively slight.

FIGURE 2.1. Two Views of Informative Writing Achievement of 9-Year-Olds, 1979–84. (Dali: Descriptive Report)


PERCENTAGE OF STUDENTS AT EACH LEVEL OF TASK ACCOMPLISHMENT
naep
% MINIMAL OR BETTER
% ADEQUATE OR BETTER
1984 55.7 2.8
1979 53.4 4.2
ELABORATED 0 0
ADEQUATE 3 4
MINIMAL 53 49
UNSATISFACTORY 43 44
NOT RATEABLE 1 2
% 0 10 20 30 40 50 60 70 80
PERCENTAGE OF STUDENTS AT EACH LEVEL OF FLUENCY
naep
% RATED 4,5, OR 6
AVERAGE
1984 34.5 2.9
1979 29.1 2.8
%
MEANS
35 30 25 20 15 10 5 0
0.0 1.0 2.0 3.0 4.0 5.0 6.0
LEVEL OF FLUENCY

No statistically significant differences from 1984 at the .05 level. No significance test is reported when the proportion of students is either >95% or <5%.

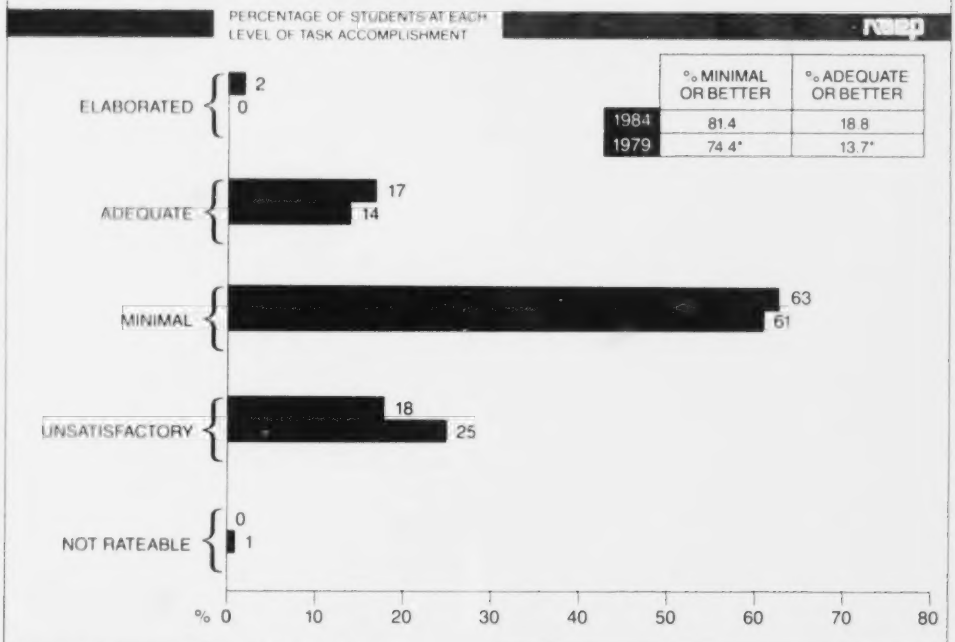
Trends in Informative Writing Achievement, 1979-84



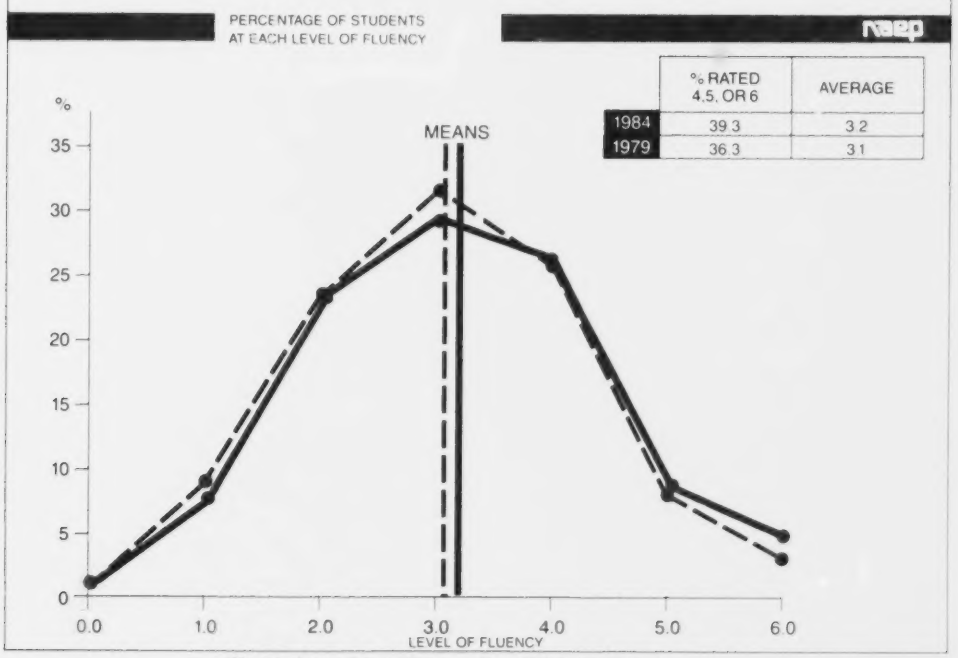
Age 13

Figure 2.2 depicts changes in the writing performance of 13-year-olds on the task asking for a description of the painting. From 1979 to 1984, 13-year-olds showed significant improvement in their ability to accomplish this task. There was an increase of 7 percent across papers evaluated as **minimal, adequate,** and **elaborated** and a general decrease in **unrateable** and **unsatisfactory** papers. In 1984, 81 percent of the 13-year-olds wrote papers rated as **minimal** or better. Although the proportion of students reaching the **adequate** level remained low in 1984 (about 19 percent), this was a significant improvement—up 5 percent—from 1979. Overall fluency on this task improved slightly from 1979 to 1984.

FIGURE 2.2 Two Views of Informative Writing Achievement of 13-Year-Olds, 1979–84. (Dall: Descriptive Report)



	% MINIMAL OR BETTER	% ADEQUATE OR BETTER
1984	81.4	18.8
1979	74.4*	13.7*



	% RATED 4.5, OR 6	AVERAGE
1984	39.3	3.2
1979	36.3	3.1

*Statistically significant differences from 1984 at the .05 level

Trends in Informative Writing Achievement, 1979-84

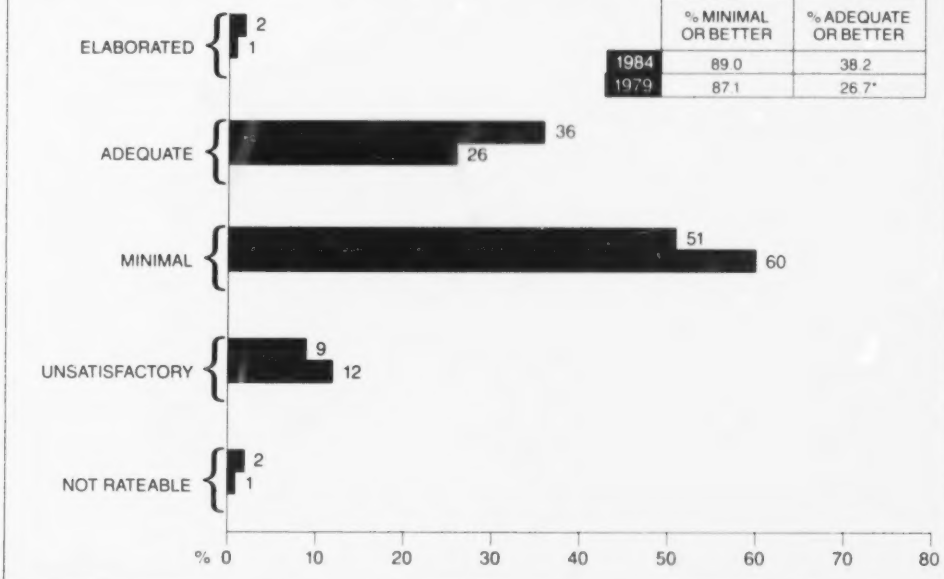
Age 17

In 1984, most 17-year-olds (89 percent) wrote at or above the **minimal** level, but only 38 percent wrote **adequate** or **elaborated** descriptions (see **Figure 2.3**). However, this represented a significant improvement since 1979 in ability to complete this task successfully. Also, the distribution of fluency scores shifted slightly toward the higher categories in 1984, with about 5 percent more 17-year-olds writing better papers as compared with 1979.

FIGURE 2.3 Two Views of Informative Writing Achievement of 17-Year-Olds, 1979–84. (Dall: Descriptive Report)

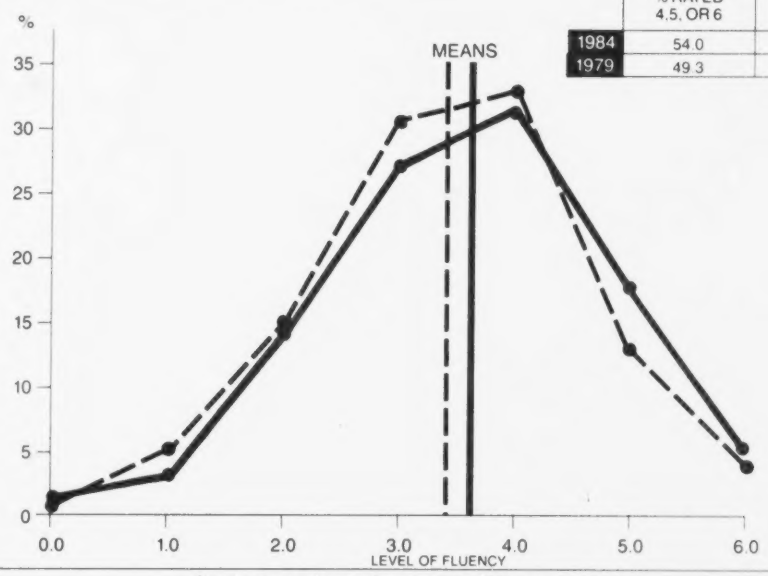
PERCENTAGE OF STUDENTS AT EACH LEVEL OF TASK ACCOMPLISHMENT

	% MINIMAL OR BETTER	% ADEQUATE OR BETTER
1984	89.0	38.2
1979	87.1	26.7*



PERCENTAGE OF STUDENTS AT EACH LEVEL OF FLUENCY

	% RATED 4, 5, OR 6	AVERAGE
1984	54.0	3.6
1979	49.3	3.4



*Statistically significant differences from 1984 at the .05 level.

Summary

Between 1979 and 1984, 13- and 17-year-olds showed significant improvements in informative writing skills. The fluency with which they presented information and ideas also increased slightly. Nine-year-olds did not make comparable gains in accomplishing this informative writing task, although like the 13- and 17-year-olds, their fluency may have increased slightly.

Even with improved performance at ages 13 and 17, levels of achievement remained low in 1984, with 62 percent of the 17-year-olds unable to write **adequate** or **elaborated** descriptions.

Chapter 3

Trends in Persuasive Writing, 1979-84

The second broad type of writing achievement examined by NAEP involves persuasive writing. Persuasive writing attempts to bring about some action or change—its aim is to influence others. Over the several assessments, persuasive tasks have ranged from providing an opinion and supporting detail in response to a request to mounting an argument that counters an opposing point of view. Regardless of the situation or approach, writers must first concern themselves with having an effect on their readers, rather than merely adding to their knowledge of a particular topic.

One persuasive item was administered at each age level in 1979 and again in 1984. At age 9, students were asked to write a persuasive letter to their "Aunt May," to convince her that they were old enough to travel alone so they could visit her. At ages 13 and 17, in another persuasive task, students were presented with the choice between a morning and an afternoon school schedule (Split Sessions) and were asked to write to their principal requesting a particular session. They had to present an argument to support their request.

Accomplishing the Task: Persuasive Writing

In order to complete these tasks effectively, students had to take a stand and support it with at least some appropriate reasons.

Unsatisfactory. Writers who performed **unsatisfactorily** on this task failed to take a stand, or took a stand but did not support it with any concrete reasons. In the following letter to Aunt May, for example, the writer offers only the global appeal to "give kids a chance" without providing any reasons to believe that such a chance would be worth taking.

Dear Aunt May,

I know every body say
I to little to travel but
I'm not if you sometimes
give kids a chance to prove
something to you Maybe it
won't be so bad. Maybe
we can help you to
give kids a Chance.

Yours truly
your nice

Writers also performed **unsatisfactorily** when the reasons they gave were not important enough to convince the reader. Thus, the following letter on Split Sessions was also rated **unsatisfactory**, because the choice of morning or afternoon session would make very little difference considering what the writer wanted to do in his or her non-school time, and therefore, probably would have very little effect on the reader of the request.

I would like to have the morning session. Because "I would like to spend time at home in the afternoon. go shoppings. do my home work use the phone, & Be with my friends!"

and also I need to train my self to go to bed early. and get up early so those are the reasons Why I want to go to the morning session

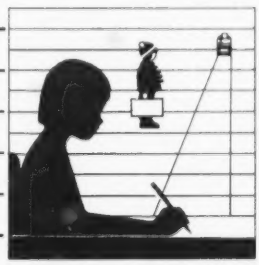
Thank You,

Minimal. In order to achieve at least a **minimal** level, the writers needed to clearly take a stand and support it with at least one appropriate reason that was consistent with their point of view. The result could be quite short, as in the following example.

Dear Aunt May,

I'm old enough to travel alone. Please let me come. The reason I'm old enough because I've already traveled alone. Please excuse me for not writing long

love,



Alternatively, students may have written considerably longer papers, managing to embed a significant reason (such as a job) among a number of less important reasons (such as having more free time or homework time).

Dear Principal:

I would like to be in the morning session from 7:30 am. to noon rather that the afternoon one going from 12:30 p.m. to 5 p.m. because if I go in the morning I can get me homework done in the afternoon and have more free time for myself to do anything I want to do. Plus I will have time to do after school jobs for a longer time to earn more money.

So if you can please arrange it so that I can go at 7:30 am. to noon I would really be thankful

Adequate. Performance at an **adequate** level required the writer to take a clear stand and support it with a brief argument or several interrelated reasons. Responses at this level, if not eloquent, seem to have at least a chance of persuading the reader to agree to the writer's request. Thus, for Aunt May:

Dear Aunt May,

I am old enough to travel alone. My mom said I could. So I hope you believe I can go travel alone. I did it before. Don't worry. I am very good when I am alone, I am.

And similarly for Split Sessions:

Dear Principal:

I really need to have the morning session. I have my piano lesson at 5:30 on Monday evenings. It would really be a hassle for me to leave the school at 5:00 and be to my lesson by 5:30. The piano teacher would have trouble switching students from the day of their lesson to a different day. I need to practice about 90 minutes before I go to my lesson so I wouldn't have time to practice before I go. Please think over your decision and give me your answer. Thank You

Sincerely,

Elaborated. Writers who went beyond the merely **adequate** offered an extended argument or an interrelated list of reasons to support their stand. Both of the following papers were rated as **elaborated**.

Dear Aunt May,

How are you? I'm fine. I would really like to visit you. I think I'm old enough because I have traveled alone before and because I don't panic If something bad would happen another reason is I know how to take care of my self. I have been on many other busses and planes alone and I have made it I would really like to visit you

Love,

P.S Please tell me the answer

Dear Principal:

I would like to have the morning session. I know it is going to be a difficult task for you to decide what students get what, but please consider my situation.

I have a job which I could start working right at 1:00 if I didn't have to go to school in the afternoons. I also need the money really bad because our family is run only by my mother. With the money I get from my job I help pay some bills examples: Car loans, telephone bill and electric. It is very difficult for our family to make ends meet. I also save half of my check for college because there is no way I can afford to go to college if I don't start saving my money now. There are several other reasons why I would like the morning session. My mom works at a factory and has to be into work by 7:30. So we would take my car and I could drop her off and come right to school. This would save on gas and money, because at night time she comes home with one of her friends

Please continue on next page ▶

16. (continued)

another reason I would like the morning session is because I could get all my work done at night while I have a break and lunch hour at work. This would save me plenty of time.

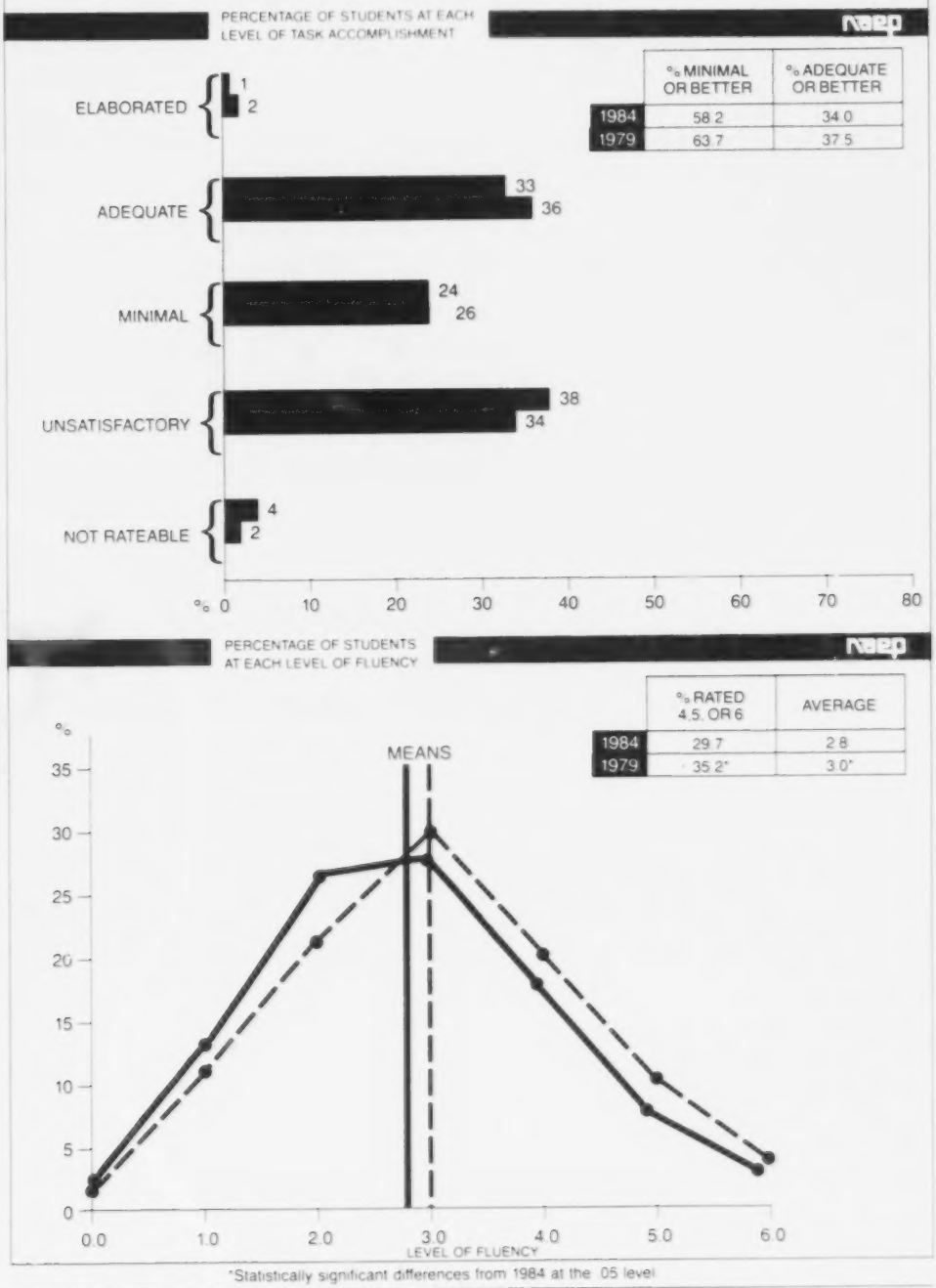
So please considered my situation. I know you have a tough decision but if I get stuck with the afternoon session I wouldn't be able to help out with the girls so please consider it. Thank you very much for listening and read this

Trends in Persuasive Writing, 1979-84

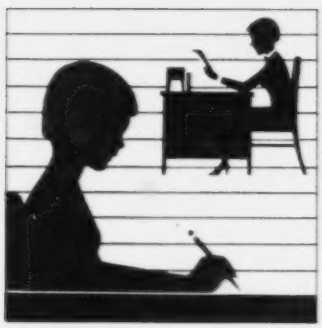
Age 9

In 1984, one-third of the 9-year-olds wrote **adequately** supported persuasive letters, and another one-fourth wrote **minimally** supported letters that indicated at least an understanding of the task. However, as shown in **Figure 3.1**, performance on this task was somewhat less successful in 1984 than in 1979: Whereas 64 percent attained the **minimal** level or better in 1979, this percentage dropped to 58 percent in 1984. Although these decreases in task accomplishment were small, they were accompanied by parallel and significant decreases in overall fluency on this task, both in the percentage of better papers and in the average level of performance.

FIGURE 3.1 Two Views of Persuasive Writing Achievement of 9-Year-Olds, 1979–84. (Aunt May: Persuasive Letter)


PERCENTAGE OF STUDENTS AT EACH LEVEL OF TASK ACCOMPLISHMENT
naep
% MINIMAL OR BETTER
% ADEQUATE OR BETTER
1984 58.2 34.0
1979 63.7 37.5
ELABORATED 1 2
ADEQUATE 33 36
MINIMAL 24 26
UNSATISFACTORY 38 34
NOT RATEABLE 4 2
% 0 10 20 30 40 50 60 70 80
PERCENTAGE OF STUDENTS AT EACH LEVEL OF FLUENCY
naep
% RATED 4.5, OR 6
AVERAGE
1984 29.7 2.8
1979 35.2* 3.0*
%
MEANS
35 30 25 20 15 10 5 0
0.0 1.0 2.0 3.0 4.0 5.0 6.0
LEVEL OF FLUENCY

*Statistically significant differences from 1984 at the .05 level.



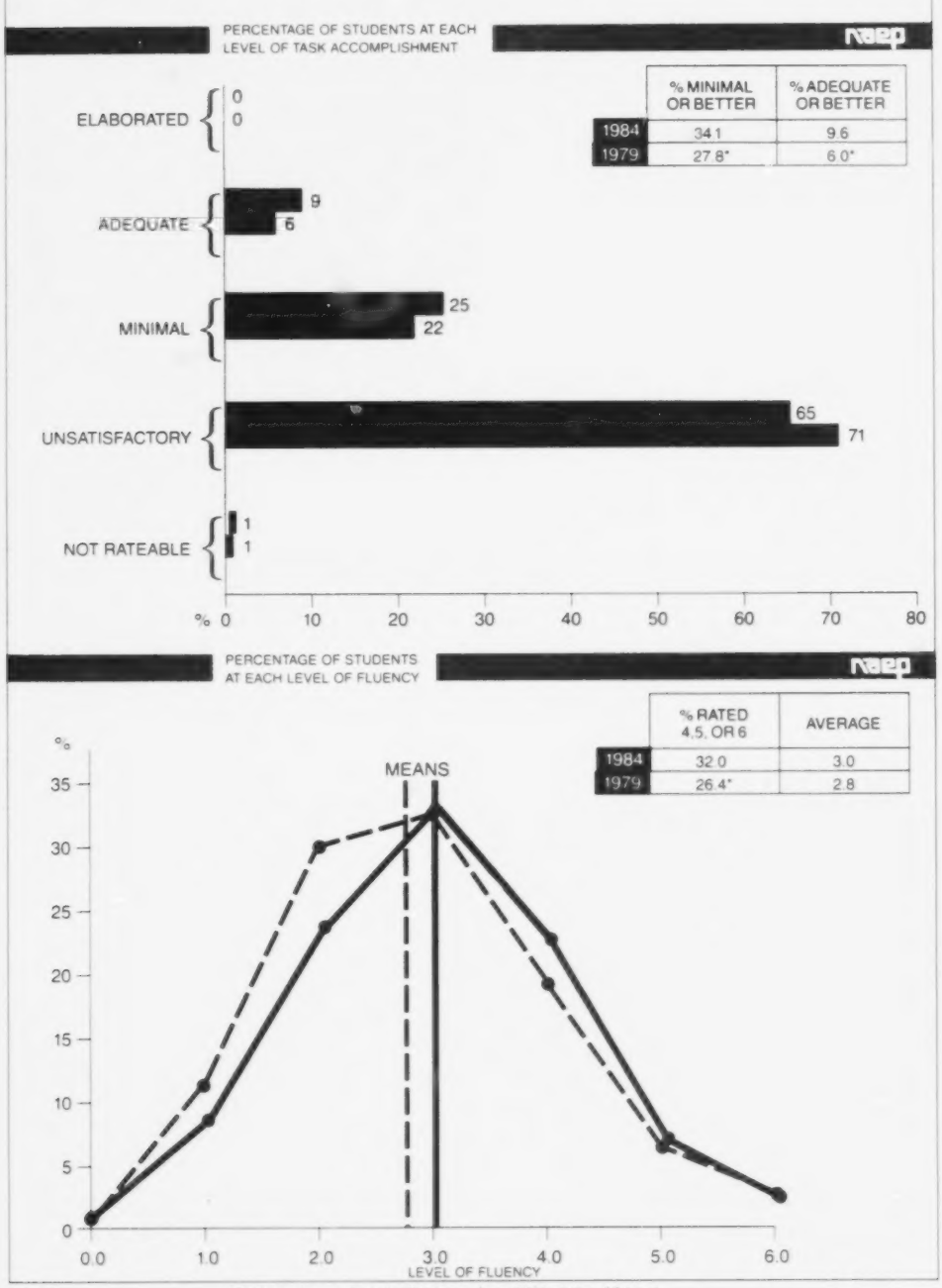
Trends in Persuasive Writing, 1979-84

Age 13

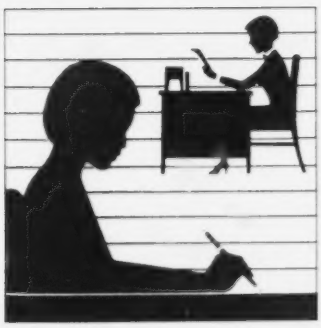
At age 13, change in persuasive writing ability was measured by performance on the letter asking the principal to assign the preferred school session—morning or afternoon. The results are presented in **Figure 3.2**. In 1984, 34 percent of the 13-year-olds wrote letters at or above the **minimal** level of performance, although only 10 percent managed to write letters judged **adequate** or better. Both of these figures represented an improvement in persuasive writing skills since the 1979 assessment, when 28 percent wrote letters at or above the **minimal** level and only 6 percent managed to write letters judged **adequate** or better.

Improvements in overall fluency paralleled those for task accomplishment with the proportion of better papers increasing from 26 to 32 percent between 1979 and 1984.

FIGURE 3.2 | Two Views of Persuasive Writing Achievement of 13-Year-Olds, 1979–84. (Split Sessions: Persuasive Letter)



*Statistically significant differences from 1984 at the .05 level.



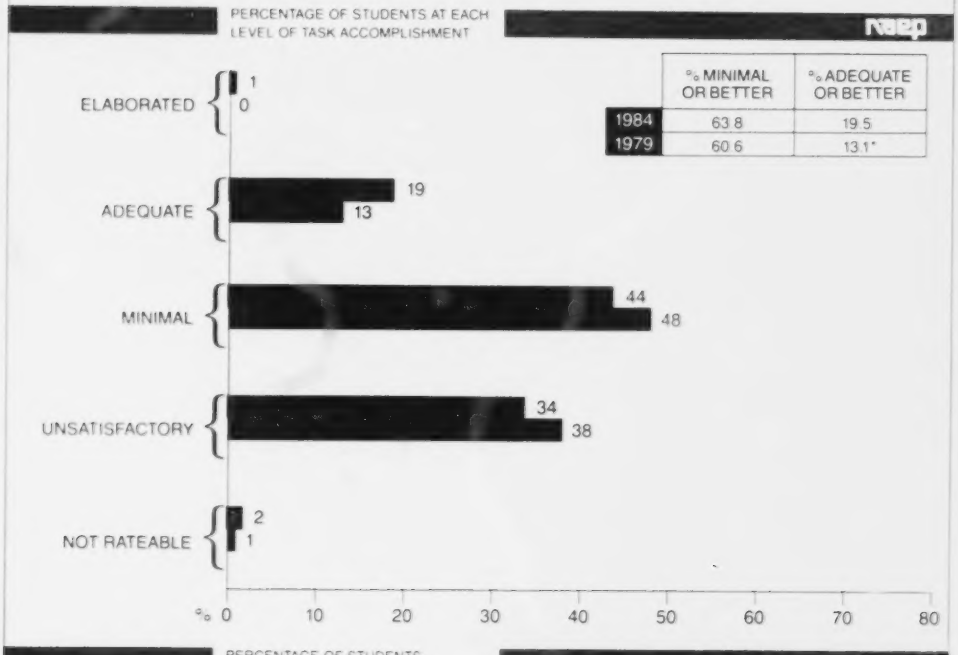
Trends in Persuasive Writing, 1979-84

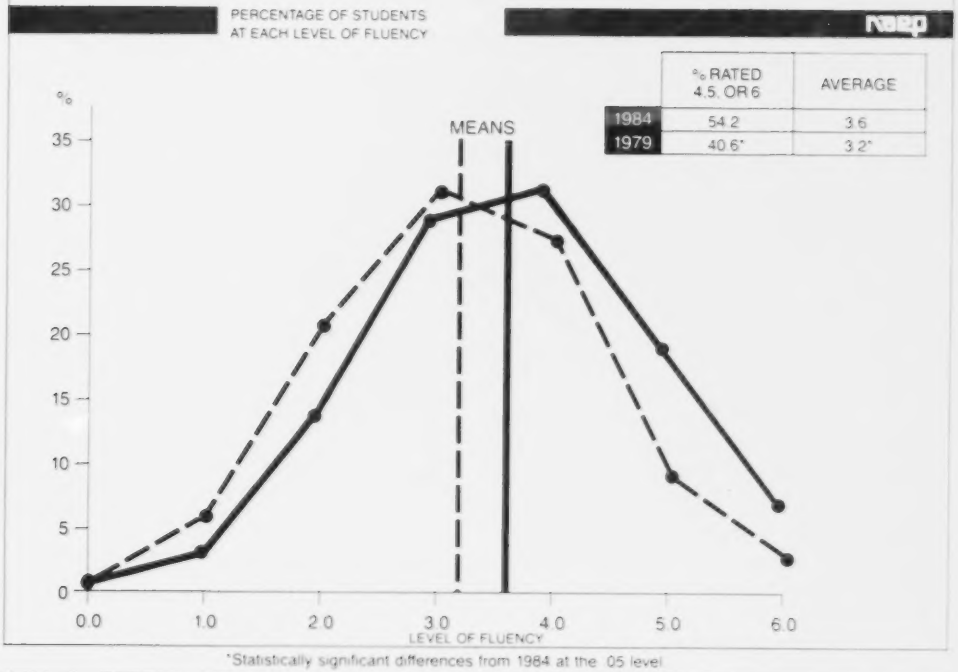
Age 17

Seventeen-year-olds were also presented with the Split Sessions task in 1979 and 1984. In 1984, 64 percent provided a **minimal** or better response, indicating an understanding of the basic elements of persuasion, and 20 percent of the students wrote either an **adequate** or **elaborated** persuasive letter. As can be seen from **Figure 3.3**, both of these percentages surpass results for 1979, when 61 percent of the letters were rated at or above the **minimal** level and only 13 percent as **adequate** or better.

The measure of overall fluency on this task showed similar gains, with the percentage of better papers rising significantly from 41 percent in 1979 to 54 percent in 1984, and the average level of fluency also showing significant improvement.

FIGURE 3.3 Two Views of Persuasive Writing Achievement of 17-Year-Olds, 1979–84. (Split Sessions: Persuasive Letter)


PERCENTAGE OF STUDENTS AT EACH LEVEL OF TASK ACCOMPLISHMENT
naep
% MINIMAL OR BETTER
% ADEQUATE OR BETTER
1984 63.8 19.5
1979 60.6 13.1*
ELABORATED 1 0
ADEQUATE 19 13
MINIMAL 44 48
UNSATISFACTORY 34 38
NOT RATEABLE 2 1
% 0 10 20 30 40 50 60 70 80



*Statistically significant differences from 1984 at the .05 level.

Summary

Achievement in persuasive letter writing, requiring students to state a position clearly and support it with appropriate reasons or arguments, increased significantly both in task accomplishment and in overall fluency from 1979 to 1984 for the two older age groups. During the same period, 9-year-olds showed a slight decrease in persuasive letter writing skills on both measures of achievement.

Even at age 17, however, overall levels of achievement on this kind of writing task remained low, with only 20 percent of the students managing to write an **adequate** or **elaborated** persuasive letter and 34 percent unable to write one that was rated above the **unsatisfactory** level.

Chapter 4

Trends in Imaginative Writing, 1974-84

In each assessment, NAEP has included some imaginative writing tasks. Sometimes students are asked to create personal or fictional narratives, sometimes to project themselves into a situation and elaborate upon the feelings or thoughts that it evokes. Such writing shapes and expresses the thinking and feeling of writers; in its more structured forms, it embraces traditional literary genres such as stories, poems, plays, or song lyrics.

One exercise in the 1984 assessment measured trends in performance in imaginative writing since 1974, at ages 9, 13, and 17. This exercise, based on a picture of a box with a hole in it and an eye peeking through the opening, asked students to imagine themselves in the picture, and then to describe the scene and how they felt about what was going on around them. They were encouraged to make their description "lively and interesting."

Accomplishing the Task: Imaginative Writing

In order to complete this task successfully, students had to suggest the situation in which they imagined themselves and to reveal their attitudes through their description of that situation.

Unsatisfactory. Writers who provided **unsatisfactory** papers left the situation undefined; therefore, even if they mentioned attitudes toward the situation, the attitudes were unexplained and unjustified. The example that follows represents those papers that did describe feelings, but did not provide any reason for the feelings by leaving the situation itself undefined.

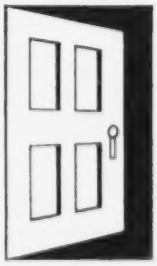
I would feel closed in. I wouldn't have very much room to move around in and I probably would be scared. I wouldn't like it because I wouldn't be able to play sports.

Minimal. Writers who were rated **minimally** successful in accomplishing this task defined the situation with little expression of related feelings or presented feelings and attitudes without clearly describing the situation. They reflected a grasp of the imaginative character of the task, but were unable to carry through with it. In the following paper, for example, the author manages to convey the discomfort and frustration of the situation, but neglects to establish a complete context for these reactions.

I want to get out but I can't. I'm hot, hungry, + tired. How soon I ask? People staring, yelling, screaming, + talking. People look at you thinking well he deserves it. Evil eyes looks at me, etc.. Also no one I know is there it's like I'm in a magic place with no one to tell me it's okay. Every hole is to small to climb through.

Adequate. Writers whose performance was **adequate** defined a clear situation and provided a clear expression of attitudes and feelings. At this level of performance, their attitudes and feelings were presented in a fashion that was consistent and appropriate to the situation, although redundancy, vagueness, or abruptness may have been present. In the following example, the situation was clearly elaborated in the context of the author's narrative, and the feelings were expressed directly, if somewhat superficially.

One day I was put inside a box I tried to get out but I was upside down I couldn't even move so I just sat there and kept hollering until a lady pulled me by my feet and lifted me out of the box boy was I happy. When she pulled me out I thanked her and ran home I was very hungry then, I ran in the house. my mother said Where have you been I was crying she said whats the matter I said some big kids threw me Inside a box and I couldn't get out. so she said don't cry, your home now she gave me. something to eat and gave me. a bath and put me to bed.



Elaborated. Writers who were most successful at this task developed a clear and consistent situation and **elaborated** upon the attitudes and feelings that were aroused within it. In the following example, the author weaves her changing emotions through the rapidly developing narrative.

The eye is not mine. I stare at it from below the window. I'm confused. The building was once deserted. I felt angry because it was once my place. Now it is not mine. I walk toward then I start to run toward the building. I feel lost in my own world. I go to my secret entrance. I climb up to the cubby hole. I see someone standing at the window. She slowly turns around. I'm shocked for I see that the eye was mine for she is me. I again feel I am myself. Suddenly it is me standing where she was. I turn around and I am no longer there.

I run accross the room. My heart thumps loudly. My mind is in a whirl.

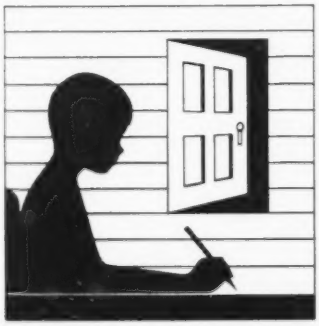
"How can I be her when I'm me, but so is she" I think.

Suddenly I am myself again but she stand in front of me. I must confront her, but I am afraid. How can I confront my self. To my surprise I am not confronting myself but myselves. There are now two of her, no four.... no too many to count I am afraid.

"Who are you" I say.

" I am you" they say (all of them)
" But you don't have only I
can be me" I respond in
a cold voice.
I fall apart from
myself. Like I'm not really there.
I stare up at the sky lights, but
I am there too.
Then, as if a needle
was shot into my head I
understand.
they are all the ways other
see me. I am to learn from
them how to make myself
better. I ask them.
" Will you show me how to
improve myselves?"
" We will!"

the end!



Trends in Imaginative Writing Achievement, 1974-84

Age 9

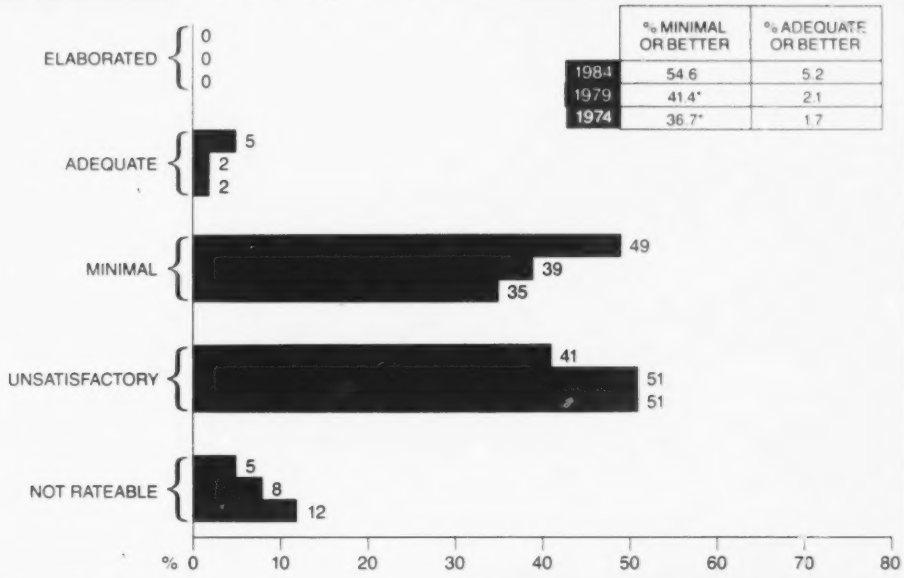
The Hole in the Box task was administered in 1974, 1979, and 1984. Trends in performance for 9-year-olds are displayed in **Figure 4.1**. Across that period, 9-year-olds showed steady improvement in their ability to enter into and elaborate upon the imaginary situation. In 1974, only 37 percent of the responses were rated as **minimal** or better; this rose to 41 percent in 1979 and 55 percent in 1984. Even in 1984, however, only 5 percent of the responses were rated as **adequate** and almost none as **elaborated**.

Overall fluency in response to this task also increased between 1974 and 1984, although the increases were less consistent and less dramatic. Average ratings (on a scale of 0 to 6) were 2.7 in 1974 and 1979, rising significantly to 3.0 in 1984.

FIGURE 4.1. Two Views of Imaginative Writing Achievement of 9-Year-Olds, 1974–84. (Hole in the Box: Imaginative Description)

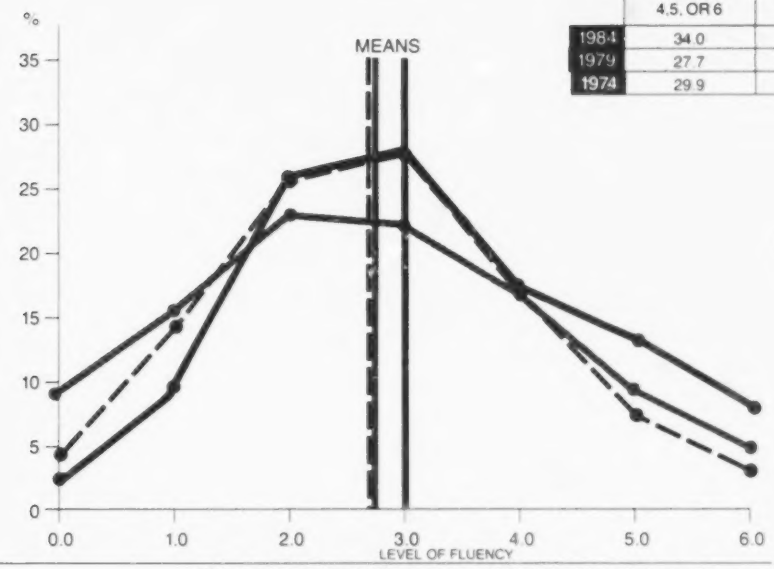
PERCENTAGE OF STUDENTS AT EACH LEVEL OF TASK ACCOMPLISHMENT

	% MINIMAL OR BETTER	% ADEQUATE OR BETTER
1984	54.6	5.2
1979	41.4*	2.1
1974	36.7*	1.7



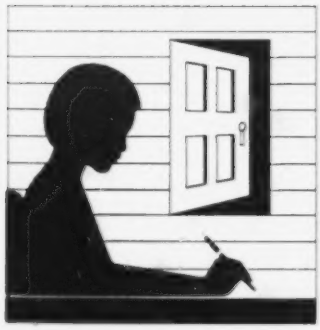
PERCENTAGE OF STUDENTS AT EACH LEVEL OF FLUENCY

	% RATED 4.5, OR 6	AVERAGE
1984	34.0	3.0
1979	27.7	2.7*
1974	29.9	2.7*



*Statistically significant differences from 1984 at the .05 level. No significance test is reported when the proportion of students is either >95% or <5%.

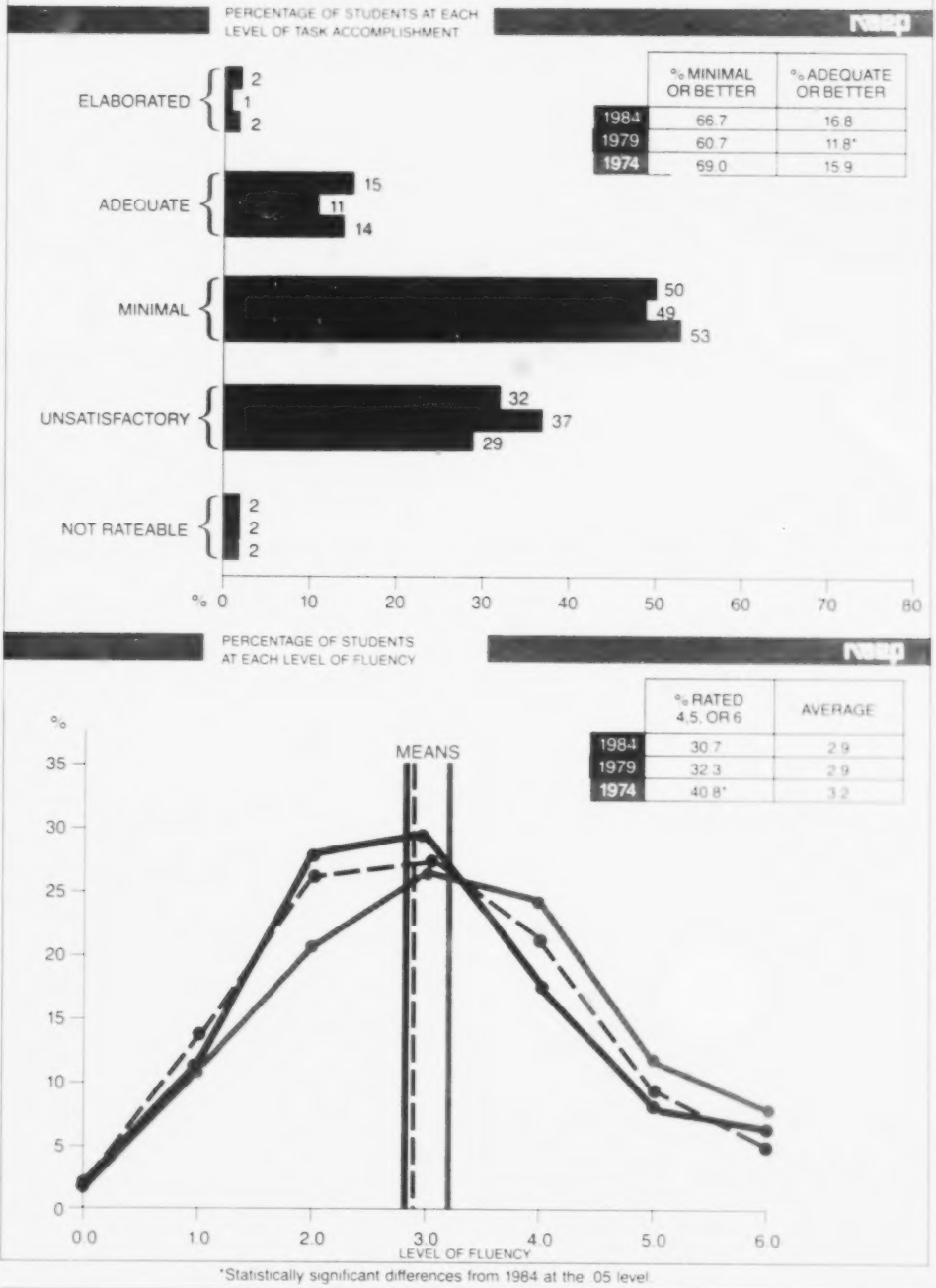
Trends in Imaginative Writing Achievement, 1974-84



Age 13

In 1984, two-thirds of the 13-year-olds were able to write a **minimal** or better description of an imaginary situation, and 17 percent were able to write an **adequate** or **elaborated** response (see **Figure 4.2**). This reflects a return to their 1974 level of performance after a significant dip in the middle of the 10-year period. Scores for overall fluency showed a similar dip, but with no evidence of recovery. The proportion of better papers at age 13 declined significantly from 41 percent in 1974 to 32 percent in 1979, ending at 31 percent in 1984.

FIGURE 4.2 Two Views of Imaginative Writing Achievement of 13-Year-Olds, 1974–84 (Hole in the Box: Imaginative Description)



*Statistically significant differences from 1984 at the .05 level.

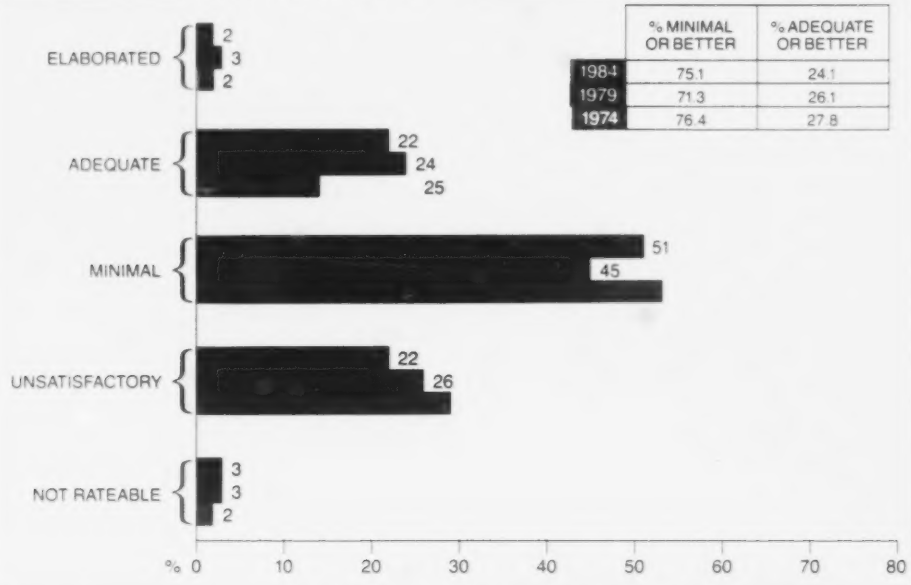
Trends in Imaginative Writing Achievement, 1974-84

Age 17

In 1984, performance of 17-year-olds on this imaginative writing task was nearly the same as a decade earlier, with about three-fourths of the students writing at or above the **minimal** level of performance and, of these, one-fourth were at the **adequate** or **elaborated** levels (see **Figure 4.3**). Patterns for overall fluency in response to this task were similar. Both the fluency and the task accomplishment levels showed a slight decrease in 1979, with some evidence of modest recovery in 1984.

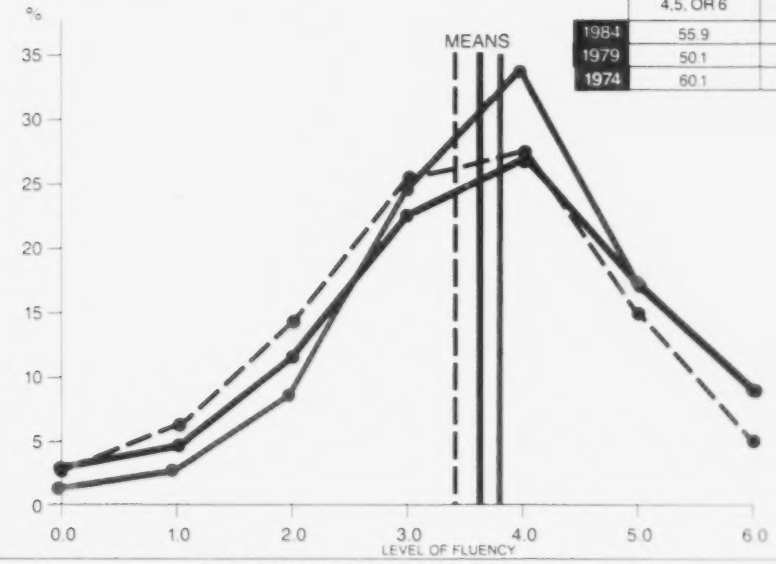
FIGURE 4.3 Two Views of Imaginative Writing Achievement of 17-Year-Olds, 1974–84. (Hole in the Box: Imaginative Description)

PERCENTAGE OF STUDENTS AT EACH LEVEL OF TASK ACCOMPLISHMENT



	% MINIMAL OR BETTER	% ADEQUATE OR BETTER
1984	75.1	24.1
1979	71.3	26.1
1974	76.4	27.8

PERCENTAGE OF STUDENTS AT EACH LEVEL OF FLUENCY



	% RATED 4, 5, OR 6	AVERAGE
1984	55.9	3.6
1979	50.1	3.4
1974	60.1	3.8

No statistically significant differences from 1984 at the .05 level

Summary

Between 1974 and 1984, the youngest age group assessed showed a significant improvement on this imaginative writing task, both in accomplishing the task and in overall fluency. The improvement occurred primarily between 1979 and 1984. The 13- and 17-year-olds, on the other hand, showed no clear improvement over the same 10-year period. Both of the older groups showed declines in performance between 1974 and 1979 and signs of recovery between 1979 and 1984.

Chapter 5

Summary of Trends in Writing Achievement Across the Decade, 1974-84

To provide a sense of the kinds of changes that have taken place in students' writing achievement over the past 10 years, this chapter will discuss results for writing tasks that were included in more than one assessment. This summary includes results for tasks discussed in previous assessment reports in addition to those presented in Chapters 2 through 4.*

In order to report trends in writing achievement as accurately as possible, the data presented are confined to instances in which: 1) the identical writing task was administered to the same age level in two or three assessments; 2) the task was administered in each assessment in the same way (using a paced audiotaped procedure in which each task was read to the students); and 3) responses collected in more than one assessment were evaluated at the same time by the same readers.

Writing Achievement, 1969-79, Results from the Third National Writing Assessment; Volume I—17-Year-Olds, Volume II—13-Year-Olds, Volume III—9-Year-Olds. Education Commission of the States, 1980.

At each age level, four or five procedurally identical tasks were used to measure changes in writing achievement from 1974 to 1979; three procedurally identical tasks (those presented in detail in Chapters 2-4) at each age level were used to measure changes from 1979 to 1984. One of these tasks at each age level was also included in the 1974 assessment and provides a direct link from assessment to assessment over the decade.

In order to provide as full a picture of writing achievement as possible, the papers were evaluated in two ways. The first is based on the primary trait scoring method and reflects students' success in accomplishing the specific informative, persuasive, or imaginative writing task. The second is based on a general impression or holistic evaluation and reflects the overall fluency of the written responses.

As we have seen in Chapters 2 through 4, results for accomplishing the task are based on levels of success. Responses are either rated as **unsatisfactory, minimal, adequate**, or **elaborated**, or they are **not rated**. Although criteria for the categories are specified in terms of each writing task, a general explanation of these levels is given below.

Levels of Task Accomplishment

Not rateable. A small percentage of the responses were blank, undecipherable, totally off task, or contained a statement to the effect that the student did not know how to do the task; these responses were considered **not rateable**.

Unsatisfactory. Students writing papers judged as **unsatisfactory** provided very abbreviated, circular, or disjointed responses that did not represent even a basic beginning toward addressing the writing task.

Minimal. Students writing at the **minimal** level recognized some or all of the elements needed to complete the task, but did not manage the elements well enough to assure the purpose of the task would be achieved.

Adequate. Adequate responses included the information and ideas critical to accomplishing the underlying task and were considered likely to be effective in achieving the desired purpose.

Elaborated. Elaborated responses went beyond the essential, reflecting a higher level of coherence and providing more detail to support the points made.

In addition to being evaluated in terms of task accomplishment, student responses were rated holistically to provide an overall estimate of the relative fluency of the writing. Readers did not make separate judgments about organization, content, grammar, usage, spelling, and punctuation, but about the overall effect of the paper. In contrast to the evaluations for task accomplishment, where responses to the same task written by more than one age group were evaluated against the same specific criteria, fluency was evaluated by rating papers on general impression relative to other papers from the same age group. (For example, a response to a given task written by a 9-year-old was ranked in comparison to the responses written by other 9-year-olds in the 1984 as well as previous assessments.) Each response was given a rating from the highest to the lowest according to six levels of fluency, with six being highest.

Figure 5.1 summarizes trends in writing achievement at ages 9, 13, and 17.

The first set of results (Panel 1) at each age shows trends in the percentage of papers at the **minimal** level or better in task accomplishment. This percentage includes all students who wrote at the **minimal, adequate**, and **elaborated** levels. The second representation (Panel 2) shows trends in the percentage of students achieving at the **adequate** level or better; it is the total percentage writing at the **adequate** and **elaborated** levels. It should be pointed out that very few students (less than 3 percent for any of the tasks assessed) wrote **elaborated** responses.

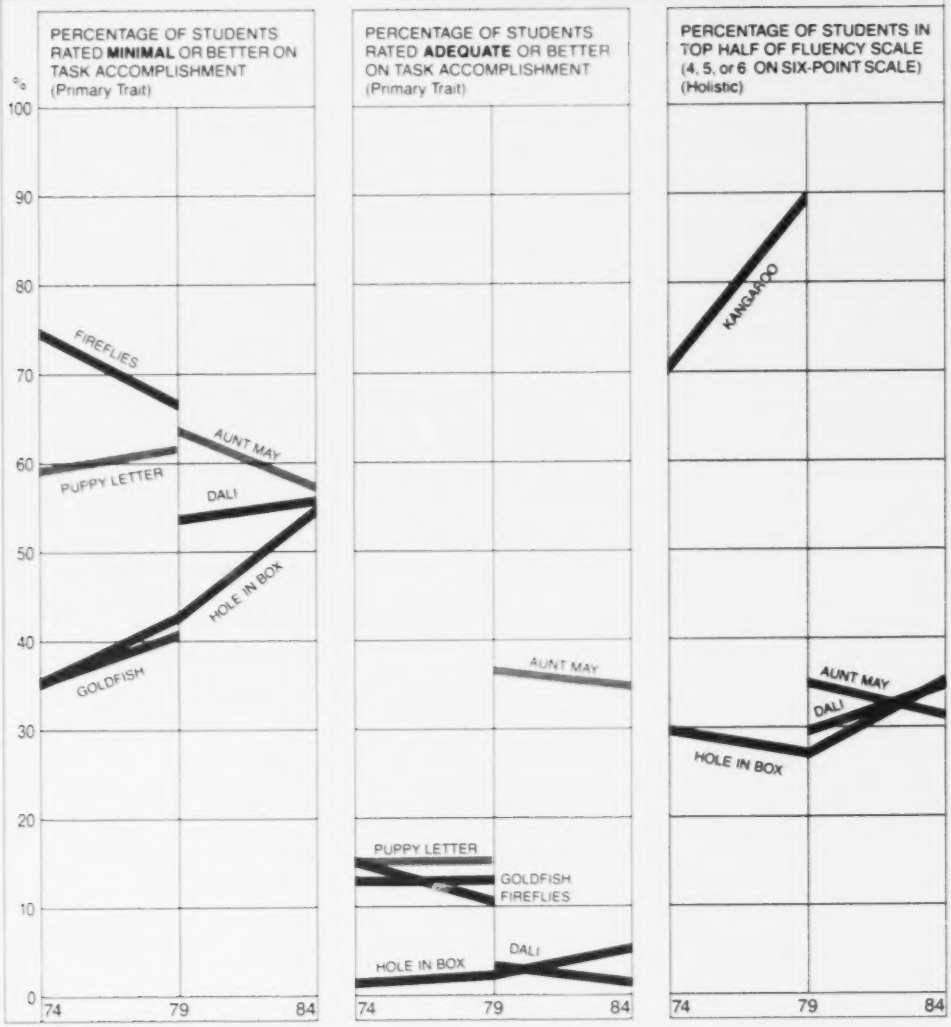
Thus, the first view depicts students' progress in moving from **unsatisfactory** performance to at least a **minimal** or basic level of performance. The second view depicts progress toward responses rated at the **adequate** level or better.

As will be evident in looking at the results for each age level, not all students achieved even a **minimal** level of performance. It also can be seen from Figure 5.1 that, although large percentages of students at all three age levels wrote responses rated as **minimal** or better, only relatively small percentages of students wrote at or above the **adequate** level.

The third view of trends in writing achievement presented for each age reflects the proportion of students rated at the three highest levels on the fluency scale in each assessment. Panel 3 (the shaded panel) shows global changes in writing performance for each age group from assessment year to assessment year. Generally, 13- and 17-year-olds showed decreased fluency from 1974 to 1979 and increased fluency from 1979 to 1984. The trends for 9-year-olds were less consistent.

9-YEAR-OLDS

naep



■ INFORMATIVE WRITING *Brief Description of Task*	AGES	ASSESSMENT YEARS
Describe a surrealistic painting by Salvador Dali for a friend who has never seen it.	9,13,17	1979-84

The trend results on the "Dali" informative writing task are detailed in Chapter 2.

■ PERSUASIVE WRITING *Brief Description of Task*	AGES	ASSESSMENT YEARS
Write a letter convincing the landlord you should get to keep your puppy.	9	1974-79
Write a letter to your favorite aunt, let's call her "Aunt May". Convince her you are old enough to travel alone to come visit her.	9	1979-84

The trend results on the "Aunt May" persuasive writing task are detailed in Chapter 3.

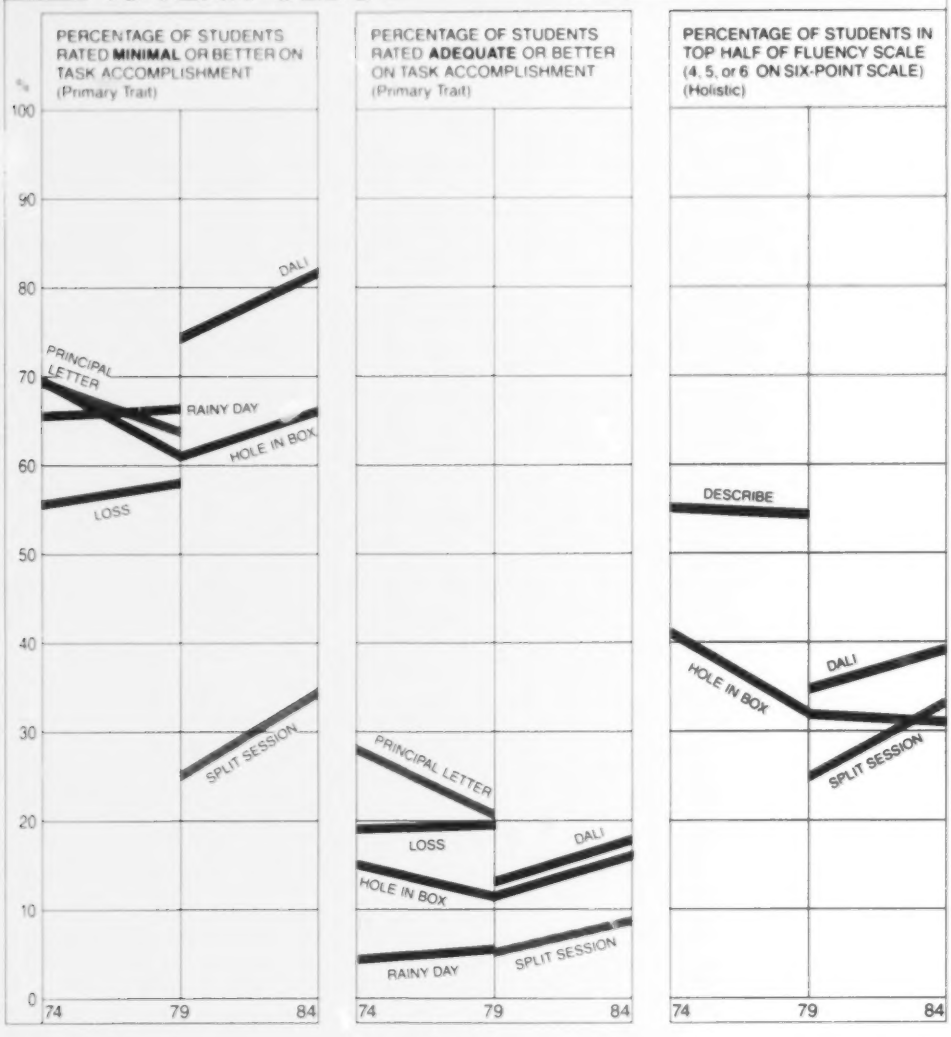
■ IMAGINATIVE WRITING *Brief Description of Task*	AGES	ASSESSMENT YEARS
Write a story about the picture of a girl trying to catch fireflies.	9	1974-79
What would it be like to be something besides a person — like a goldfish, airplane, horse or tree?	9	1974-79
Imagine yourself in the picture of a box with a hole in it and an eye peeking through the opening. Describe the scene and how you feel about it.	9,13,17	1974-79-84

The trend results on the "Hole in the Box" imaginative writing task are detailed in Chapter 4.

Write a story about the picture of a kangaroo jumping over a fence.	9	1974-79

NOTE: For results reported in 1979, responses to a given task were rated either for task accomplishment (primary trait) or fluency (holistically), not both. For results reported in 1984, responses were rated using both methods. For 1974-79, the writing tasks and detailed results are contained in NAEP's previous writing trend reports published by the Education Commission of the States.

13-YEAR-OLDS



■ INFORMATIVE WRITING

Brief Description of Task	AGES	ASSESSMENT YEARS
Describe a surrealistic painting by Salvador Dali for a friend who has never seen it.	9,13,17	1979-84

The trend results on the "Dali" informative writing task are detailed in Chapter 2.

Describe a place you know about such as the Empire State Building, a gigantic wheat field or a sports stadium.	13,17	1974-79

■ PERSUASIVE WRITING

Brief Description of Task	AGES	ASSESSMENT YEARS
Write your principal a letter about the one thing in your school that should be changed and how it would improve your school.	13	1974-79
Convince the principal to give you the school session of your choice — morning or afternoon.	13,17	1979-84

The trend results on the "Split Session" persuasive writing task are detailed in Chapter 3.

■ IMAGINATIVE WRITING

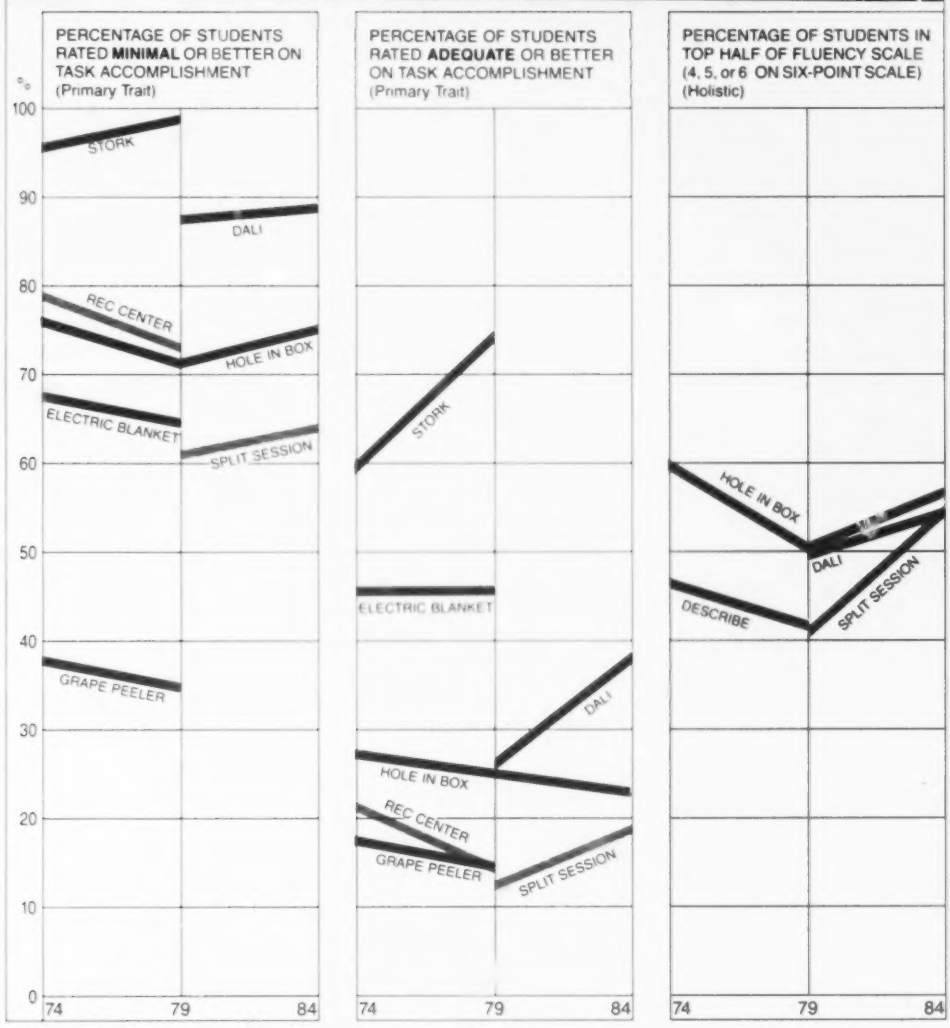
Brief Description of Task	AGES	ASSESSMENT YEARS
Imagine yourself in the picture of a box with a hole in it and an eye peeking through the opening. Describe the scene and how you feel about it.	9,13,17	1974-79-84

The trend results on the "Hole in the Box" imaginative writing task are detailed in Chapter 4.

Pretend you saw it was a rainy day. Write about how a rainy school morning makes you feel.	13	1974-79
Tell how it feels to lose something or someone of special importance.	13	1974-79

NOTE: For results reported in 1979, responses to a given task were rated either for task accomplishment (primary trait) or fluency (holistically), not both. For results reported in 1984, responses were rated using both methods. For 1974-79, the writing tasks and detailed results are contained in NAEP's previous writing trend reports published by the Education Commission of the States.

17-YEAR-OLDS



■ INFORMATIVE WRITING

Brief Description of Task	AGES	ASSESSMENT YEARS
Describe a surrealistic painting by Salvador Dali for a friend who has never seen it.	9,13,17	1979-84

The trend results on the "Dali" informative writing task are detailed in Chapter 2.

Write a letter explaining that you should not be billed every month for the electric blanket you never received.	17	1974-79
Describe a place you know about such as the Empire State Building, a gigantic wheat field or a sports stadium.	13,17	1974-79

■ PERSUASIVE WRITING

Brief Description of Task		
Support or oppose a plan to convert an old house into a student recreation center.	17	1974-79
Convince the principal to give you the school session of your choice — morning or afternoon.	13,17	1979-84

The trend results on the "Split Session" persuasive writing task are detailed in Chapter 3.

■ IMAGINATIVE WRITING

Brief Description of Task	AGES	ASSESSMENT YEARS
Imagine yourself in the picture of a box with a hole in it and an eye peeking through the opening. Describe the scene and how you feel about it.	9,13,17	1974-79-84

The trend results on the "Hole in the Box" imaginative writing task are detailed in Chapter 4.

Look at the picture of a stork and make up a story about how it appeared in your neighborhood.	17	1974-79
Have fun writing a letter to return your gold-plated grape peeler.	17	1974-79

NOTE: For results reported in 1979, responses to a given task were rated either for task accomplishment (primary trait) or fluency (holistically), not both. For results reported in 1984, responses were rated using both methods. For 1974-79, the writing tasks and detailed results are contained in NAEP's previous writing trend reports published by the Education Commission of the States.

Age 9

The 9-year-olds showed different trends in achievement on different writing tasks across the last decade.

During the first five years of the decade (1974-79), the proportions of students reaching at least the **minimal** level showed slight increases on three of the writing tasks (two imaginative and one persuasive), but a decrease on a third imaginative task. Proportions of **adequate** or better performance remained relatively stable, but there was a decline on the same imaginative task that showed the decrease at the **minimal** level. Fluency scores for the two tasks for which data are available for 1974 to 1979 moved in opposite directions.

During the second five-year period (1979 to 1984), there was a sharp increase in **minimal** performance on the imaginative task (describing an imaginary situation based on a picture), accompanied by a slight increase at the **adequate** level on the same task. The informative task (describing a painting) introduced in 1979 showed a slight increase at the **minimal** level accompanied by a very slight decrease at the **adequate** level. For persuasive writing, there was a slight increase at the **minimal** level from 1974 to 1979, followed by a decrease from 1979 to 1984 in performance on the persuasive task introduced in the 1979 assessment.

On balance, the writing performance of 9-year-olds was relatively stable from 1974 to 1979. Performance decreased on the persuasive task from 1979 to 1984, while informative writing skills remained about the same. Imaginative writing performance improved during that same period.

Age 13

Thirteen-year-olds showed mixed trends between 1974 and 1979, but consistently improved performance between 1979 and 1984.

For imaginative writing, at both the **minimal** and **adequate** levels, the proportion of students accomplishing the task improved slightly between 1974 and 1979 on two tasks and decreased on a third. Performance also declined on the persuasive task during the same period. Performance on task accomplishment, however, increased for all three of the tasks between 1979 and 1984. During the same period, fluency ratings improved as well, except on the imaginative task.

Between 1974 and 1979, fluency decreased for both the imaginative and informative tasks. That two of three tasks showed increased fluency from 1979 to 1984 suggests a reversal in this trend.

The writing performance of 13-year-olds between 1974 and 1979 showed increases on some tasks but decreases on others, with more declines than improvements. However, the nearly uniform improvement between 1979 and 1984 on all tasks assessed by NAEP indicates a recovery from previous declines at age 13. Writing performance in the early 1980s seems to have recovered to 1974 levels for this age group.

Age 17

Performance at age 17 decreased for most tasks between 1974 and 1979 and recovered somewhat from 1979 to 1984.

Declines between 1974 and 1979 occurred on most tasks. The only exception was success in accomplishing the task for an imaginative story about a stork; this task showed particularly strong improvement at the **adequate** level. For all tasks, 17-year-olds showed consistent improvements between 1979 and 1984, the only exception being a slight decrease in the percentage of **adequate** or better responses to the imaginative task. This task, which required a description of an imaginary situation, was administered in all three assessments, and it showed a very slight but steady decline across the decade at the higher levels of performance.

Subgroups

While the report of national trends is of interest to educational policy makers and planners, an understanding of the state of writing achievement in America is incomplete without attention to the diverse subgroups that comprise the nation. Do trends in the writing performance for particular subgroups parallel or help explain trends for the nation as a whole?

Performance of Black, Hispanic, and White Students

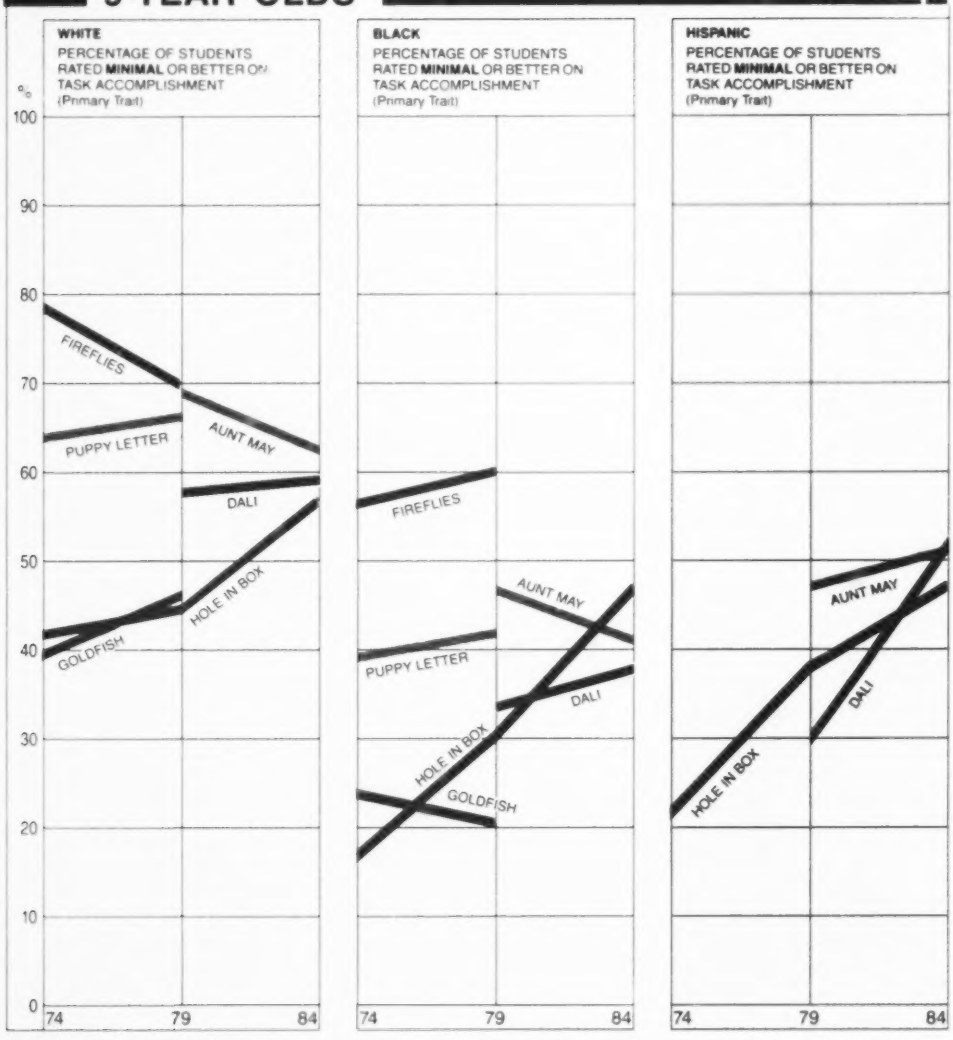
All three writing assessments have examined the performance of Black students; for items included in the 1984 assessment, trend results are also available for Hispanic populations. For each assessment, the performance of each group has been compared with that of their White age-mates. It should be noted, however, that since so few Black and Hispanic students were sampled on each writing task, the results of their performance must be interpreted with caution.

Figure 5.2 depicts trends in writing performance by age for Black, Hispanic, and White students. The data shown are for percentages of students writing papers rated as **minimal** or better on task accomplishment. As with the national results, the percentage of students writing papers rated as **adequate** or better was substantially lower for each of the three subgroups on each task (see Data Appendix).

The results suggest that during the 10-year period from 1974 to 1984, trends in performance were similar for the three groups within each age level.

The greatest differences appeared at age 9. White 9-year-old students showed mixed patterns of performance over time, whereas the performance of Hispanic 9-year-olds improved on all three writing tasks analyzed in 1984. In fact, in 1984, only the Hispanic 9-year-olds showed improvement on the persuasive task. Black 9-year-olds also showed comparatively more improvement than their White age-mates from 1974 to 1979, but trends in the achievement of these two groups were very similar from 1979 to 1984. For both 13-year-olds and 17-year-olds, the trends for White, Black, and Hispanic students were parallel. Thirteen-year-olds in all three groups showed less consistent results from 1974 to 1979 than did 17-year-olds, who tended to decline during that same time span. At both 13 and 17, all three subgroups improved from 1979 to 1984.

9-YEAR-OLDS



■ INFORMATIVE WRITING

Brief Description of Task	AGES	ASSESSMENT YEARS
Describe a surrealistic painting by Salvador Dali for a friend who has never seen it.	9,13,17	1979-84

The trend results on the "Dali" informative writing task are detailed in Chapter 2.

■ PERSUASIVE WRITING

Brief Description of Task	AGES	ASSESSMENT YEARS
Write a letter convincing the landlord you should get to keep your puppy.	9	1974-79
Write a letter to your favorite aunt, let's call her "Aunt May". Convince her you are old enough to travel alone to come visit her.	9	1979-84

The trend results on the "Aunt May" persuasive writing task are detailed in Chapter 3.

■ IMAGINATIVE WRITING

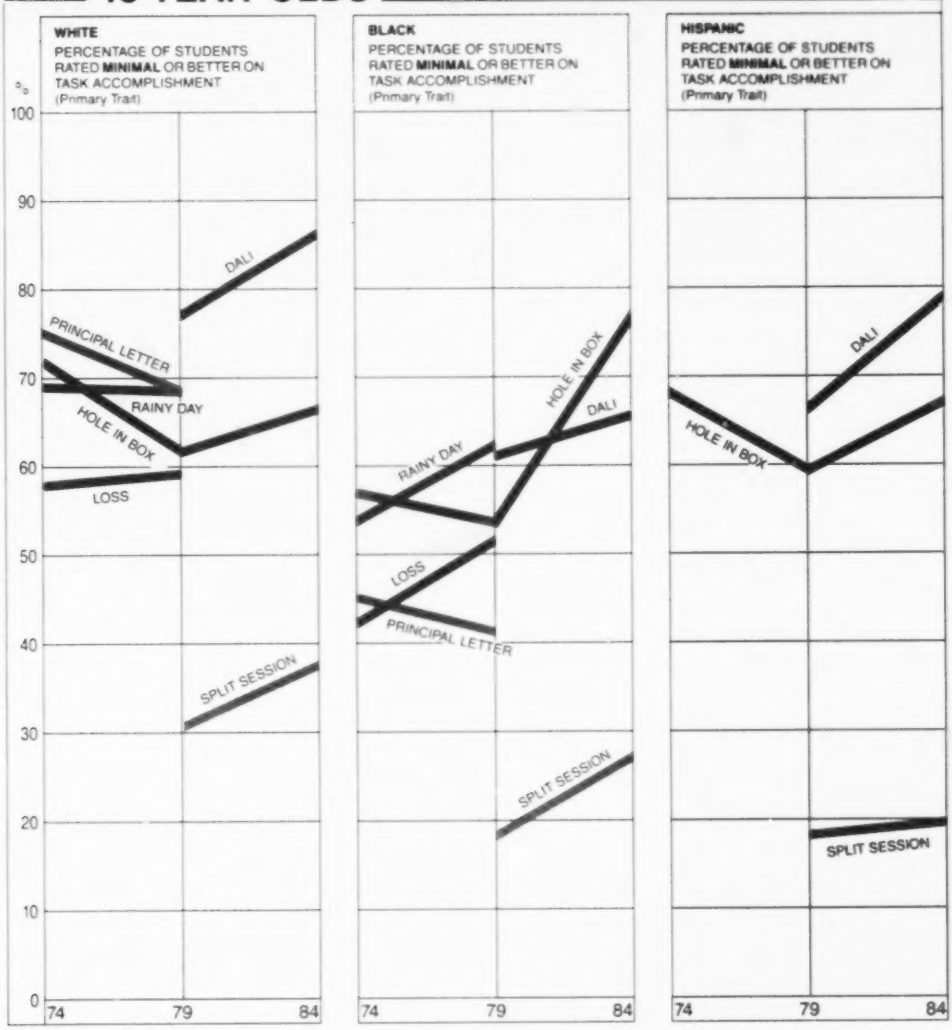
Brief Description of Task	AGES	ASSESSMENT YEARS
Write a story about the picture of a girl trying to catch fireflies.	9	1974-79
What would it be like to be something besides a person — like a goldfish, airplane, horse or tree?	9	1974-79
Imagine yourself in the picture of a box with a hole in it and an eye peeking through the opening. Describe the scene and how you feel about it.	9,13,17	1974-79-84

The trend results on the "Hole in the Box" imaginative writing task are detailed in Chapter 4.

Write a story about the picture of a kangaroo jumping over a fence.	9	1974-79

NOTE: For results reported in 1979, responses to a given task were rated either for task accomplishment (primary trait) or fluency (holistically), not both. For results reported in 1984, responses were rated using both methods. For 1974-79, the writing tasks and detailed results are contained in NAEP's previous writing trend reports published by the Education Commission of the States.

13-YEAR-OLDS



■ INFORMATIVE WRITING
Brief Description of Task

	AGES	ASSESSMENT YEARS
Describe a surrealistic painting by Salvador Dali for a friend who has never seen it.	9,13,17	1979-84

The trend results on the "Dali" informative writing task are detailed in Chapter 2.

■ PERSUASIVE WRITING
Brief Description of Task

	AGES	ASSESSMENT YEARS
Write your principal a letter about the one thing in your school that should be changed and how it would improve your school.	13	1974-79
Convince the principal to give you the school session of your choice — morning or afternoon.	13,17	1979-84

The trend results on the "Split Session" persuasive writing task are detailed in Chapter 3.

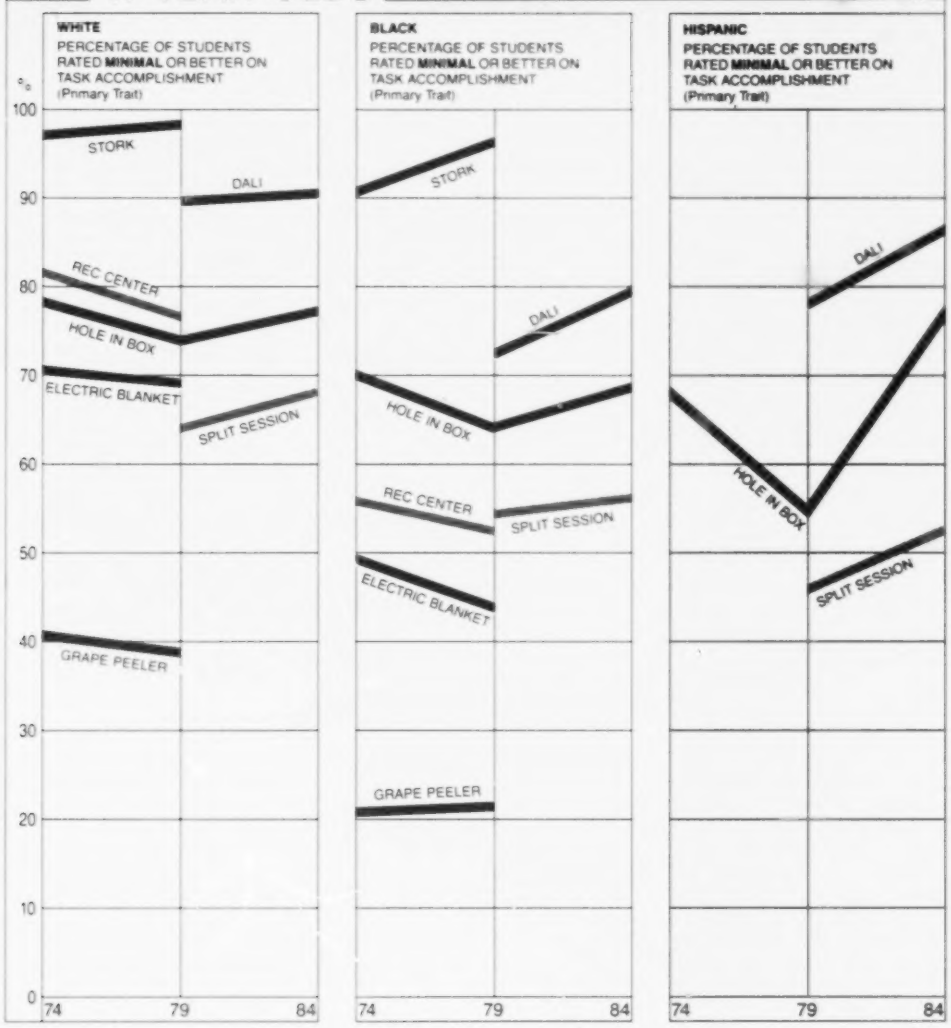
■ IMAGINATIVE WRITING
Brief Description of Task

	AGES	ASSESSMENT YEARS
Imagine yourself in the picture of a box with a hole in it and an eye peeking through the opening. Describe the scene and how you feel about it.	9,13,17	1974-79-84

The trend results on the "Hole in the Box" imaginative writing task are detailed in Chapter 4.

Pretend you saw it was a rainy day. Write about how a rainy school morning makes you feel.	13	1974-79
Tell how it feels to lose something or someone of special importance.	13	1974-79

17-YEAR-OLDS



■ INFORMATIVE WRITING
Brief Description of Task

	AGES	ASSESSMENT YEARS
Describe a surrealistic painting by Salvador Dali for a friend who has never seen it.	9,13,17	1979-84

The trend results on the "Dali" informative writing task are detailed in Chapter 2.

Write a letter explaining that you should not be billed every month for the electric blanket you never received.	17	1974-79

■ PERSUASIVE WRITING
Brief Description of Task

Support or oppose a plan to convert an old house into a student recreation center.	17	1974-79
Convince the principal to give you the school session of your choice — morning or afternoon.	13,17	1979-84

The trend results on the "Split Session" persuasive writing task are detailed in Chapter 3.

■ IMAGINATIVE WRITING
Brief Description of Task

	AGES	ASSESSMENT YEARS
Imagine yourself in the picture of a box with a hole in it and an eye peeking through the opening. Describe the scene and how you feel about it.	9,13,17	1974-79-84

The trend results on the "Hole in the Box" imaginative writing task are detailed in Chapter 4.

Look at the picture of a stork and make up a story about how it appeared in your neighborhood.	17	1974-79
Have fun writing a letter to return your gold-plated grape peeler.	17	1974-79

Differences in performance on the imaginative writing task in 1984 are interesting. Generally, at all three age levels Black and Hispanic students did not perform as well as White students across the writing assessment. However, of the three subgroups, Black 13-year-olds performed the best on the imaginative writing task, with 75 percent of their responses rated **minimal** or better. For White and Hispanic 13-year-olds, between 65 and 66 percent of the responses were rated **minimal** or better. White and Hispanic 17-year-old students also performed similarly on this imaginative task (both with 76 percent of their responses rated **minimal** or better). In contrast, Black 17-year-olds did not perform as well as the White and Hispanic 17-year-olds on this task (68 percent rated **minimal** or better).

Other Subgroups

Trends in student writing proficiency were also analyzed by gender and geographic region. For each of these analyses, patterns were remarkably similar to those of the nation as a whole.

Summary

Despite erratic changes from 1974 to 1984, the writing proficiency of the nation's students, on balance, showed mixed trends or declined during the first five years and then recovered during the second half of the decade. The pattern of some decline in the late 1970s, as well as the subsequent recovery in the early 1980s, was clearest for the 13- and 17-year-olds. Trends in performance at age 9 have been less consistent, with declines in performance on some items offset by improvements on others. While undramatic, the national trend in writing proficiency in the second half of the decade (1979-84) has been generally positive. Students in all age groups did better on most writing tasks in the 1984 assessment; the major exception was a significant decrease on the persuasive writing task at age 9.

At all three age levels, many students wrote papers rated at or above the **minimal** level. In 1984, the percentages across the various tasks ranged from 34 to 89 percent. Even with the recent gains on achievement, however, the proportion of students able to perform **adequately** or better remained quite low, ranging from 3 to 38 percent across the tasks. Students did produce their assessment responses under restraints of limited time, artificial tasks, no access to resource materials, and for no other external purpose or reward. From this perspective, particularly the 9-year-olds may be producing fairly reasonable first drafts. Also, most 9-year-olds are in the third or fourth grade. They have had some instruction in writing, but probably not a great deal, and they have many years of development ahead of them before they reach maturity as writers. It is expected that first drafts would be less well organized and contain fewer well-developed ideas than later drafts. However, it is also reasonable to expect that the older students would write drafts beyond the **minimal** level. In 1984, 76 percent of the 17-year-olds did not write an **adequate** imaginative description and 62 percent failed to respond **adequately** on an informative writing task. When asked to write a persuasive letter, 80 percent of the 17-year-olds did not respond **adequately**.

In general, the 10-year trends in writing proficiency are disappointing. Even though the subgroups, and consequently the nation's student population as a whole, wrote better in 1984 than in 1979, the increases shown in the first part of the 1980s only served to bring performance back up after declines in the latter part of the 1970s. At all age levels, the majority of students still did not write **adequate** responses to the informative, persuasive, or imaginative tasks included in the assessment.

Chapter 6

Trends in Writing Instruction, 1974-84

In addition to completing a variety of specific writing tasks in 1984, 13- and 17-year-old students were also asked questions about the amount of attention given to writing instruction in their own school experience. A few of these questions were also asked in earlier assessments and trends in responses from one assessment to the next provide an indication of student perceptions of changes in instruction.

Time Spent on Writing Instruction

During the past decade, teachers have been encouraged to increase the amount of time spent on writing and writing instruction. To examine trends in attention to writing, students were asked to estimate the amount of time that was devoted to writing instruction as part of their English classes. Responses for 17-year-olds (**Table 6.1**) span the decade from 1974 to 1984 and suggest that attention to writing has indeed increased. The number of students reporting little or no instruction in writing decreased significantly from 48 to 35 percent. Responses at age 13 (available from 1979 to 1984), parallel the responses for 17-year-olds for the period for which they are available. Looked at another way, however, fully one-third of the 17-year-olds and two-fifths of the 13-year-olds report that they receive little or no writing instruction.

Time Spent in English Class on Writing Instruction†

Table 6.1

	Little or No Time Spent		One-Third of the Time or More	
	Age 13	Age 17	Age 13	Age 17
1984	42.4%	35.1%	56.0%	61.9%
1979	44.0	37.4	55.1	61.5
1974	—	47.6*	—	52.1*

†Percentages do not total 100 due to missing responses by some students.
*Statistically significant differences from 1984 at the .05 level.

Another indication of the attention to writing instruction is the number of writing assignments that students are asked to complete. Students were asked to estimate the number of essays and reports that they had written during the preceding six weeks for all of their school subjects combined. The percentages of 13- and 17-year-olds reporting they had *not* written any papers and the average numbers of papers written by both age groups over the six-week period are displayed in **Table 6.2**. The average number of papers written by 17-year-olds was essentially the same in 1984 as it was in 1974—about four papers written across all subjects in the six-week period preceding the assessment. This average decreased significantly from 1974 to 1979 and then returned to previous levels in 1984—still less than one essay or report written per week across all school subjects.

Number of Reports and Essays Written During the Previous Six Weeks for all School Subjects

Table 6.2

	Percentage of Students Reporting No Papers Written		Average Number of Papers Written	
	Age 13	Age 17	Age 13	Age 17
1984	17.9%	9.6%	2.9	3.8
1979	16.4	13.8*	3.0	3.5*
1974	—	12.4*	—	4.0

*Statistically significant differences from 1984 at the .05 level.

Significantly fewer 17-year-olds reported having written *no* papers over the six-week period in 1984 than in either 1974 or 1979.

However, from 1979 to 1984 the number of papers reported by 13-year-olds remained essentially constant—an average of about 3 over the six-week period. Compared with the 17-year-olds, the 13-year-olds spent less time on writing, wrote less frequently, and were more likely to do no writing at all.

Attention to Individual Writing Assignments

Recent calls for reform of writing instruction have emphasized the need for students and teachers to spend more time on individual assignments, with more planning or prewriting activities, more drafts and revisions before turning papers in, and more extensive comments (as opposed to just a grade) in the teachers' responses. Beginning in 1974, students were asked about two of these emphases—amount of drafting and revision and frequency of teacher suggestions on their papers. Beginning in 1979, a question about making notes before writing was added. The responses to these questions are displayed in **Table 6.3**.

Teachers' suggestions on student papers show a clear increase for 17-year-olds from 1974 to 1984. In 1974, only 32 percent of the students reported that they usually received teacher suggestions on how to improve their papers; by 1984 such comments were reported by more than half. The proportion of students reporting only sometimes receiving such comments fell by a comparable amount during this period. Patterns at age 13 were similar to those at age 17 from 1979 to 1984, although high rates of missing responses in 1979 complicate the interpretation for both age groups.

Attention to drafting and revision shows a parallel but much less dramatic shift over the decade. In 1974, 54 percent of the 17-year-olds reported that they usually rewrote their papers before turning them in; by 1984 this had risen only to 59 percent. Trends at age 13 again parallel those at age 17 for the two assessments for which data are available.

Encouragement to jot down ideas or make notes before writing parallels the findings for teacher suggestions and number of drafts. At age 13, the proportion of students reporting they were encouraged to plan before writing increased from 41 to 47 percent; at age 17, it rose from 55 to 65 percent.

When responses at age 13 are compared with those at age 17, however, writing again seems to receive considerably less attention in the younger group. The 13-year-olds reported that they are less likely to be encouraged to plan before writing, less likely to receive teacher suggestions on their papers, and less likely to rewrite their papers before turning them in.

Student Reports of How Often They Engage in Aspects of the Writing Process

Table 6.3

When your papers are returned, do they have written suggestions on how to improve your writing?

	Usually	Sometimes	Never	Missing
Age 13				
1984	33.1%	47.0%	19.0%	1.0%
1979	24.0*	51.2*	15.9*	8.9
Age 17				
1984	56.3	33.7	7.3	2.7
1979	42.2*	38.6*	6.7	12.5
1974	31.5*	58.5*	9.8*	0.2

Do you write a paper more than once before you turn it in to your teachers?

	Usually	Sometimes	Never	Missing
Age 13				
1984	46.4	36.7	15.9	1.0
1979	38.1*	42.8*	13.0*	6.1
Age 17				
1984	58.7	31.1	7.6	2.7
1979	51.0*	32.5	6.9	9.5
1974	54.4*	40.1*	5.2*	0.2

Are you encouraged to jot down ideas and make notes about the topic of your paper before you write it?

	Usually	Sometimes	Never	Missing
Age 13				
1984	47.1	42.5	9.8	0.6
1979	40.9*	47.1*	11.0	1.0
Age 17				
1984	64.5	27.3	5.7	2.6
1979	54.5*	35.0*	7.6*	2.8

*Statistically significant differences from 1984 at the .05 level. No significance test is reported when the proportion of students is either >95 percent or <5 percent.

Trends in Instruction for Selected Subgroups

Like the data on student writing proficiency presented in the first parts of this report, students' reports about writing instruction can be examined separately for various subgroups within the population. The purpose of doing so is to determine whether the increased attention to writing instruction has been general, affecting all students, or targeted at specific subgroups.

When examined in this way, trends over time have been very similar for subgroups defined by sex, region, and race/ethnicity (see Data Appendix). White, Black, and Hispanic students' reports on the amount of time devoted to writing instruction in English class are summarized briefly in **Table 6.4** and illustrate the general pattern. For all three groups, the proportion of students reporting little or no attention to writing at age 17 decreased between 9 and 12 percentage points from 1974 to 1984; on the same question, the change at age 13 from 1979 to 1984 is minimal for all three groups. Although 10-year trends are similar, at each point in time Black and Hispanic 17-year-old students reported somewhat more class time devoted to writing than did their White age-mates. At age 13, the reports in the three groups were more nearly identical.

Time Spent in English Class on Writing Instruction for White, Black, and Hispanic Students

Table 6.4

Little or no Time Spent on Writing Instruction

	Age 13			Age 17		
	White	Black	Hispanic	White	Black	Hispanic
1984	42.6%	43.1%	40.7%	37.1%	27.5%	28.0%
1979	44.7	40.3	43.8	38.5	31.0	34.2
1974	—	—	—	49.5*	36.6*	37.5

*Statistically significant differences from 1984 at the .05 level.

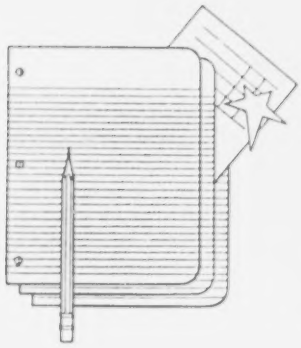
Summary

For the decade 1974-84, students' reports indicate relatively few changes in the amount of writing occurring, but some increases in the writing instruction that they received. In general, 17-year-old students reported receiving more writing instruction in English class in 1979 than they did in 1974, and both 13- and 17-year-olds reported little change between 1979 and 1984.

Additionally, both 13- and 17-year-olds reported increased attention to prewriting activities between 1979 and 1984. While 17-year-olds report more rewriting and teacher suggestions in 1984 than 1974, the high rates of missing responses in 1979 make the patterns difficult to interpret.

Little is actually understood about the impact of various writing instruction methods on achievement, and this relationship needs to be researched further before drawing any conclusions based on the NAEP data. It may be that simply spending more time discussing writing is not helpful. It may be that instruction must be reinforced with more opportunities to implement what is learned in actual writing situations.

Above all, writing is a functional activity that people take on to help them achieve specific purposes. It may be that, until school writing activities are presented as a means of accomplishing personal and school-related goals, they will have a limited effect on students' performance and achievement.



Procedural Appendix

A Description of the NAEP Writing Assessments

General Background About NAEP

The National Assessment of Educational Progress (NAEP) is an ongoing, congressionally mandated project established to conduct national surveys of the educational attainments of young Americans. Its primary goal is to determine and report the status of and trends over time in educational achievement. NAEP was initiated in 1969 to obtain comprehensive and dependable national educational achievement data in a uniform, scientific manner. Today, NAEP remains the only regularly conducted national survey of educational achievement at the elementary, middle, and high school levels.

Since 1969, NAEP has assessed 9-year-olds, 13-year-olds, and 17-year-olds. In 1983, NAEP began sampling students by grade as well as by age. In addition, NAEP periodically samples young adults. The subject areas assessed have included reading, writing, mathematics, science, and social studies, as well as citizenship, literature, art, music, and career development. Assessments were conducted annually through 1980 and have been conducted biennially since then. All subjects except career development have been reassessed to determine trends in achievement over time. To date, NAEP has assessed approximately 1,300,000 young Americans.

NAEP completed a young adult literacy assessment in 1985. The 1986 effort includes in-school assessments of mathematics, reading, science, and computer competence, along with special probes of U.S. history and literature.

From its inception, NAEP has developed assessments through a consensus process. Educators, scholars, and citizens representative of many diverse constituencies and points of view design objectives for each subject area assessment, proposing general goals they feel students should achieve in the course of their education. After careful reviews, the objectives are given to item writers, who develop assessment questions appropriate to the objectives.

All exercises undergo extensive reviews by subject-matter and measurement specialists, as well as careful scrutiny to eliminate any potential bias or lack of sensitivity to particular groups. They are then administered to a stratified, multistage probability sample. The students sampled are selected so that their assessment results may be generalized to the entire national population. Once the data have been collected, scored, and analyzed, NAEP publishes and disseminates the results. The objective is to provide information that will aid educators, legislators, and others to improve education in the United States. Some of the questions used in each assessment are made available to anyone interested in studying or using them. The rest are kept secure for use in future assessments for the examination of trends over time.

To improve the usefulness of NAEP achievement results and provide the opportunity to examine policy issues, in recent assessments NAEP has asked numerous background questions. Students, teachers, and school officials answer a variety of

questions about instruction, activities, experiences, curriculum, resources, attitudes, and demographics.

NAEP is supported by the Office for Educational Research and Improvement, Center for Statistics in the U.S. Department of Education. In 1983, Educational Testing Service assumed responsibility for the administration of the project, which had previously been administered by the Education Commission of the States. NAEP is governed by an independent, legislatively defined board, the Assessment Policy Committee.

General Background About the Four NAEP Writing Assessments

There have been four national assessments of writing, the first in 1969-70 and subsequently in the 1973-74, 1978-79 and 1983-84 school years. Each has included the assessment of 9-, 13-, and 17-year-old students on a variety of open-ended writing tasks, with one or more of the tasks being readministered in successive assessments in order to gather some information about trends in writing performance over time.

All four NAEP writing assessments used a deeply stratified, three-stage sampling design. The first stage of sampling entails defining primary sampling units (PSUs)—typically counties, but sometimes aggregates of sparsely populated counties; classifying the PSUs into strata defined by region and community type; and randomly selecting PSUs. For each age level, the second stage entails enumerating, stratifying, and randomly selecting schools, both public and private, within each PSU selected at the first stage. In 1984, 1,577 schools participated in the NAEP assessment—683 at age 9, 549 at age 13, and 345 at age 17. The third stage involves randomly selecting students within a school for participation in NAEP. The 1984 assessment included 24,437 students at age 9, 26,228 at age 13, and 28,992 at age 17. Some students sampled (less than 5 percent) were excluded because of limited English proficiency or a severe handicap. In 1984, NAEP began collecting descriptive information about excluded students.

In each of the first three assessments (as with all NAEP assessments prior to 1983-84), the total battery was divided among mutually exclusive booklets and each booklet in turn was administered to a nationally representative sample of students. However, since no student was administered more than one booklet, the matrix design allowed analyses of information within booklets, but not among different booklets. The new NAEP design, instituted for the 1983-84 assessment, remedies this deficiency by using a powerful variant of matrix sampling called Balanced Incomplete Block (BIB) spiralling. With this procedure, the total assessment battery is divided into blocks of items, with each block 15 minutes long. Each student is administered a booklet containing three blocks (assigned to booklets in such a way that each block appears in the same number of booklets and each pair of blocks appears in at least one booklet) as well as a set of background questions common to all students.

Incorporating BIB spiralling is a significant change in NAEP that serves to improve both sampling efficiency and analysis potential. However, the matrix-sampled booklets of the first three writing assessments were accompanied by paced audiotapes of the exercise stimuli. With BIB spiralling, many different booklets—and thus different

sets of exercises—were administered to a particular class in a particular session, and the booklets could no longer be accompanied by audiotapes. To estimate differences in achievement that might result from this procedural change, in 1984 NAEP also conducted an additional administration of four booklets containing a subset of NAEP trend items using the previous paced-tape procedures. This four-booklet dual administration of approximately one-third of the 1983-84 reading and writing assessment questions was conducted at each age level, with each paced-tape booklet administered to a carefully selected probability sample of students representative of the nation.

In general, as shown in **Table A.1,** the previous writing assessment procedures using audiotapes were significantly less difficult for students than the new BIB spiralled procedure, which relies on students' ability to read and understand each writing assignment. In every case responses were rated better for the paced (audiotape) mode of assessment.

Differences in Writing Performance Using BIB and Paced Administration Procedures for the 1983-84 Assessment

Table A.1

	Percent Primary Trait 2,3,4			Holistic Mean		
	BIB	Paced	Diff.	BIB	Paced	Diff.
Age 9						
Dali	39.1%	55.5%	−16.3%*	2.5	2.9	−0.4
Aunt May	45.0	58.2	−13.2*	2.5	2.8	−0.4
Hole in the Box	37.2	54.6	−17.3*	2.4	3.0	−0.6
Age 13						
Dali	71.7	81.4	−9.7*	2.9	3.2	−0.2
Split Sessions	31.8	34.1	−2.3	2.8	3.0	−0.2
Hole in the Box	60.3	66.7	−6.4	2.7	2.9	−0.2
Age 17						
Dali	82.0	89.0	−7.0*	3.4	3.6	−0.2
Split Sessions	59.7	63.8	−4.1	3.3	3.6	−0.3
Hole in the Box	66.5	75.1	−8.6*	3.2	3.6	−0.5

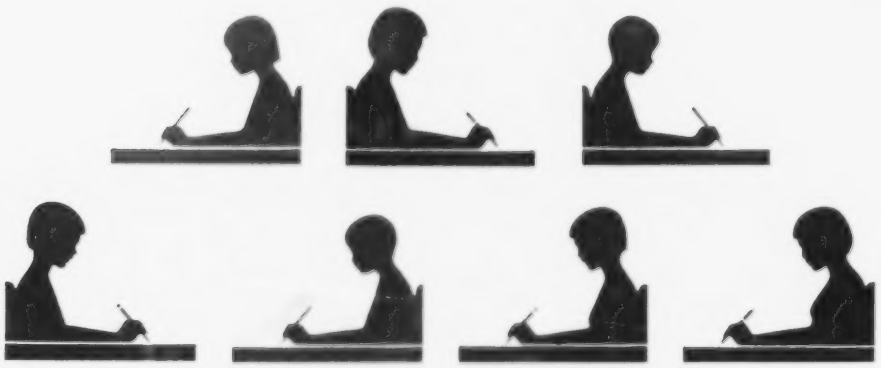
*Statistically significant difference at the .05 level.

To enable the reporting of trends over time, the statistics presented in this report are not based on the full 1983-84 NAEP writing assessment, but are limited to the data obtained from the subset of writing tasks at each age that were included in the booklets administered in accordance with the single-booklet, paced-tape procedures, in exactly the same manner as in past writing assessments.

Although the need for overlapping procedures and analyses designed to link the two methods had been anticipated by NAEP staff, only about half of the previously administered writing items (and therefore only about one-fifth of all the writing items included at each age/grade level in the full 1983-84 writing assessment) were selected for dual assessment—appearing in both the primary BIB spiralled assessment and in the much smaller paced-tape assessment. The trend results presented here are based upon this limited selection of writing items administered at each age, and generalizations based on the results should be viewed with caution, particularly when they pertain to one type of writing at one age level. These items span different periods in NAEP's history. One of the items was included in the two previous writing assessments (1974 and 1979) and two of these were included in the previous assessment as well as in this assessment, thereby enabling comparisons in student performance to be made across 10 years (1974, 1979, and 1984) or across five years (1979 and 1984).

In order to provide a fuller perspective on trends in writing proficiency during the last 10 years, we have reported the newly analyzed trend information in the context of the trend data for those items collected during the earlier five-year time span (1974 to 1979) and reported by the Education Commission of the States.* The complete set of trend results is based only on comparisons of identical writing tasks administered in the same way in at least two assessments. All responses to each task from all assessment administrations were evaluated at the same time by the same readers.

The data linking back to the first 1969-70 writing assessment were minimal—one single national sample (about 2,500 papers) on one imaginative writing task rated using the primary trait method at each age level, and one national subsample (about 400 papers) on a different task at each age level rated holistically. Given these limited data and the fact that any subgroup trends from 1969-70 to 1974-79 would be based on only one imaginative writing task, this report is limited to trends over the last decade based on changes between the 1974, 1979, and 1984 assessments. The full data set relied upon is summarized in **Table A.2**.



Writing Achievement, 1969-79, Results from the Third National Writing Assessment: Volume I—17-year-olds, Volume II—13-year-olds, Volume III—9 year-olds. Education Commission of the States, 1980.

Sample Sizes for Results Presented in this Report

Table A.2

Writing Tasks	Scoring Method†	Number in Sample 1974 9	1974 13	1974 17	1979 9	1979 13	1979 17	1984 9	1984 13	1984 17
Informative										
Dan* (description)	P&H	—	—	—	2,482	2,496	2,433	1,351	1,275	1,539
Electric Blanket (business letter)	P	—	—	2,276	—	—	2,781	—	—	—
Describe (description)	H	—	420	417	—	536	538	—	—	—
Persuasive										
Aunt May* (letter)	P&H	—	—	—	2,525	—	—	1,386	—	—
Spit Session* (letter)	P&H	—	—	—	—	2,735	2,742	—	1,276	1,540
Puppy Letter (letter)	P	2,643	—	—	2,494	—	—	—	—	—
Principal (letter)	P	—	2,552	—	—	2,793	—	—	—	—
Recreation Center (written speech)	P	—	—	2,308	—	—	2,784	—	—	—
Imaginative										
Hole in the Box* (description)	P&H	2,543	2,513	2,246	2,464	2,782	2,666	1,344	1,289	1,534
Goldfish (description)	P	2,611	—	—	2,475	—	—	—	—	—
Loss (description)	P	—	2,607	—	—	2,775	—	—	—	—
Fireflies (narration)	P	2,573	—	—	2,553	—	—	—	—	—
Kangaroo (narration)	H	409	—	—	494	—	—	—	—	—
Rainy Day (narration)	P	—	2,621	—	—	2,804	—	—	—	—
Stork (narration)	P	—	—	2,281	—	—	2,748	—	—	—
Grape Peeler (satire-humor)	P	—	—	2,283	—	—	2,765	—	—	—
Background Questions		—	—	2,237	—	29,430	26,631	—	5,158	6,209

*Analysis performed by Educational Testing Service in conjunction with analysis of the 1983-84 writing assessment results.
†P = Primary Trait, H = Holistic

In summary, this report is based upon the writing achievement of in-school 9-, 13-, and 17-year-olds in the 1973-74, 1978-79, and 1983-84 school years. It includes data analyzed and reported by NAEP when it was administered by the Education Commission of the States.* The report further includes detailed results for one writing task at each age which was included in the last three assessments, permitting a view of changes in student writing at three points in time during the last decade; two additional writing tasks at each age were included in the last two assessments.

**Writing Achievement, 1969-79, Results from the Third National Writing Assessment; Volume I—17-year-olds, Volume II—13-year-olds, Volume III—9-year-olds.* Education Commission of the States, 1980.

In each of three writing assessments, 13-year-olds were assessed in the fall (October-December), 9-year-olds in the winter (January-February), and 17-year-olds in the spring (March-May).

Birthdate ranges for each age group in each of the last three assessments follow:

Assessment	Age 9	Age 13	Age 17
1973-74	1964	1960	10/56-10/57
1978-79	1969	1965	10/61-10/62
1983-84	1974	1970	10/66- 9/67

Content of the Writing Assessments

Each writing assessment contained a range of writing tasks measuring performance on sets of objectives developed by nationally representative panels of writing specialists, educators, and concerned citizens. Although some changes were made in the objectives from assessment to assessment, the writing tasks forming the basis of this report were kept constant across two or three assessments.

In order to describe the framework for the entire writing assessment, and therefore the context for reporting the results contained herein, the full text of one of the major objectives developed for the 1984 writing assessment, entitled "Students Use Writing to Accomplish a Variety of Purposes," is reproduced below.

Students Use Writing to Accomplish a Variety of Purposes†

> Writing occurs regularly in people's personal and social lives as well as in school settings. People write to accomplish many different purposes, such as a letter to straighten out a billing error, a speech to explain a personal viewpoint on some issue, or a story for a school magazine. The ability to explain ideas to document events in writing can also help in a variety of job situations. Letters, reports, inventories, and a wide range of record keeping systems are integral to many businesses in today's "information society." Consequently, students need opportunities to develop a wide range of writing skills by writing for many purposes in varying contexts or situations.
>
> In the sections that follow, three broadly inclusive purposes for writing are discussed: informative, persuasive, and literary. These purposes often blend into each other and vary in their mixtures according to the contexts for writing. For example, an autobiography might very well be considered literary, informative, and persuasive; a job application and resume may inform as well as persuade. Although these three purposes may frequently coexist in a piece of writing, one or another type may predominate. Writers' purposes are shaped by their initial perceptions of their topic, by the ways they consider their audience, by the social or instructional contexts in which they are writing, and by changes in focus that occur as their topic begins to develop a character of its own.

†*Writing Objectives, 1983-84 Assessment.* National Assessment of Educational Progress, 1982.

A. Informative Writing

Informational writing is used to share knowledge and convey messages, instructions, and ideas. Like all writing, informational writing is filtered through the writers' impressions, understandings, and feelings. Writing to inform others can involve reporting or retelling events or experiences that have happened. It can also involve analyzing or examining concepts and relationships or developing new hypotheses or generalizations from existing records, reports, and explanations. Depending on the demands of the task, the type of information and the context for writing, including the audience, writers may use one, several, or all of these skills.

B. Persuasive Writing

Persuasive writing attempts to bring about some action or change. Though it may begin in exploratory writing, and though it may contain great amounts of information—facts, details, examples, comparisons, statistics, or anecdotes—its aim is to influence others. Persuasive writing may entail responding to requests for advice by giving an opinion and supporting reasons. However, it usually involves initiating an attempt to convince readers by setting forth one's own point of view with evidence to back it up. Argument, with refutation, becomes part of persuasion when the writer knows there is opposition to what he or she is advocating. As such, persuasive writing must be concerned with the positions, beliefs, or attitudes of particular readers and with the possibility of winning their support or changing their beliefs or attitudes.

In all persuasive writing, writers must choose the stance they will take. They can, for instance, use emotional or logical appeals or an accommodating or demanding tone. Regardless of the situation or approach, writers must be concerned first with having an effect on readers, over and above merely adding to their knowledge of a particular topic.

C. Literary [Imaginative] Writing

Literary writing provides a special way of sharing our experiences and understanding the world. In this sense, literary writing shapes and expresses our thinking and feeling while contributing to our awareness of ourselves as makers, manipulators, and interpreters of reality. There is a wide variety of forms that literary writing can take, such as stories, poems, plays or song lyrics.

The term "literary" can also be used to define a motive or purpose for writing. The literary motive is evident whenever a writer's language breaks its conventional, "everyday" patterns in order to please or surprise, or when the language calls attention to itself and to the writer as a "shaper" or performer.

Literary language is difficult to catalog, but some conventional distinctions are illustrative: attention to rhythm and tone; the use of dialogue, narrative, and anecdote; the presence of metaphor, simile, and the less

commonly labeled figures and tropes; the sense of play, pleasure, and surprise that is evident in a turn of phrase, a shift in plot, a line break, or an unexpected word or piece of punctuation. A persuasive statement, for example, can be convincing not only on the basis of its internal logic, but according to the strength of its illustrative material (its "stories"), its rhythm, the voice of its persona—all of those features that define the piece of writing as a performance on a page and not just a record of information.

The remaining NAEP 1983-84 writing assessment objectives discussed the use of writing as a way of thinking and learning, managing the writing process, controlling language, and valuing writing.

Scoring

The exercises discussed in this report were evaluated using two procedures: primary trait and holistic scoring. For each procedure, raters scored all the papers collected from the two or three different assessments at the same time. Responses from the three age groups were scored separately, and each kind of scoring was done by a different group of raters.

Primary Trait Scoring (Task Accomplishment)

The primary trait scoring guides were developed to focus raters' attention on how successfully each writing sample accomplished the rhetorical task specified by the writing prompt. This involved isolating particular features of the writing essential to accomplishing the task and developing criteria for various levels of performance based on those features. Papers were rated against these performance criteria, rather than in terms of relative quality within the population sampled. On a simple task, it is possible that all papers might be rated in the highest categories; on a difficult task, none might move out of the lowest categories.

For the exercises reported here, five levels of proficiency were defined for each task: **unrateable, unsatisfactory, minimal, adequate**, and **elaborated. Unrateable** responses included those that were blank, off task, unreadable, or "I don't know." Across tasks, **unsatisfactory** responses were those that failed to reflect a basic understanding of the informative, persuasive, or imaginative purpose of the writing. **Minimal** responses recognized the elements needed to complete the task, but were not managed well enough to ensure the intended effect of the writing that resulted. **Adequate** responses included those features critical to accomplishing the underlying purpose; responses scored as **adequate** are likely to have the intended effect. **Elaborated** responses went beyond the merely **adequate**, reflecting a higher level of coherence and elaboration that is highly desirable, if not absolutely necessary.

A 20 percent random subsample of all the papers scored in 1983-84 (regardless of assessment year) was scored by a second rater to provide an estimate of interrater reliabilities for the primary trait scoring of the three new trend items. **Table A.3** displays both the intraclass correlation and the percentage of exact score point agreement between first and second readers. The latter is displayed since assessment results are presented by category or levels of proficiency. By either measure, the rater reliabilities were very high.

Percentages of Exact Score Point Agreement and Intraclass Correlation Coefficients for Primary Trait (Task Accomplishment) Scoring Conducted in 1983-84

Table A.3

	1974 Papers		1979 Papers		1984 Papers	
	Percent Exact Agreement	Reliability Coefficient	Percent Exact Agreement	Reliability Coefficient	Percent Exact Agreement	Reliability Coefficient
Age 9						
Hole in the Box	92%	.90	93%	.89	90%	.86
Dali	—	—	88	.83	90	.83
Aunt May	—	—	88	.89	92	.95
Age 13						
Hole in the Box	85	.82	85	.83	78	.79
Dali	—	—	90	.86	78	.73
Split Sessions	—	—	90	.84	87	.79
Age 17						
Hole in the Box	90	.90	89	.85	92	.91
Dali	—	—	90	.89	90	.89
Split Sessions	—	—	91	.89	89	.91

Holistic Scoring (Overall Fluency)

The trend items assessed in 1983-84 were also scored holistically to provide an estimate of the relative fluency of the writing. When rating holistically, the readers concentrate on their general impression of a writing sample relative to the other papers they have read.

Guidelines for the holistic scoring were developed by the chief readers and table leaders—all of whom were experienced holistic readers—who began by surveying the pool of papers for each age level on each task and selecting examples representing six levels of proficiency for that age on that task (a seventh level was routinely used for blank or unrateable papers). Levels 1-3 were used for bottom-half papers, and levels 4-6 for top-half papers. Chief readers used the sample papers to train readers first to decide whether papers were "top half" or "bottom half" and then to make finer distinctions. In general, holistic scoring produces a roughly normal distribution of scores for the total sample of papers, with scores equally distributed around the center of the scale.

The purpose of NAEP's holistic evaluation was to detect changes in writing performance for each age level on each task. Thus, papers written in response to a particular writing task by 9-year-olds in the two or three assessments of writing including that task were randomly mixed together and rated relative to each other. The differences in performance reported between assessment years within an age group are a direct result of that comparative process. On tasks given to more than one age group, the

differences in levels of performance noted from younger to older age groups are a result of the readers' own internal standards.

Interrater reliabilities for the holistic scoring were also estimated by rescoring a 20 percent subsample of the papers. The resulting intraclass correlations are displayed in **Table A.4.** Interrater reliabilities for the holistic scoring were acceptably high for comparing group performance, although for most comparisons they were noticeably lower than those for the corresponding primary trait scoring. This is probably because the general impression procedure does not require readers to evaluate papers against specific criteria as with primary trait scoring, but rather to familiarize themselves with sets of essays that illustrate different levels of performance on a specific task ("range finders"). Readers are asked to make a global judgment about where each paper fits within the range and this leaves more latitude for individual interpretations by readers. Still, although exact agreement is much lower than with the primary trait method, readers are clearly in general agreement about the relative quality of the papers.

Intraclass Correlation Coefficients for Holistic Scoring Conducted in 1983-84

Table A.4

	1974 Papers			1979 Papers			1984 Papers		
	Ages			Ages			Ages		
	9	13	17	9	13	17	9	13	17
Hole in the Box	.94	.75	.77	.91	.72	.82	.83	.77	.79
Dali	—	—	—	.76	.70	.77	.78	.78	.78
Aunt May	—	—	—	.75	—	—	.84	—	—
Split Sessions	—	—	—	—	.73	.73	—	.68	.71

Relationship Between Primary Trait (Task Accomplishment) and Holistic (Overall Fluency) Scores

Since each of the 1984 trend items was scored using both a holistic and primary trait approach, it was possible to examine the interrelationships between the two sets of scores. The relevant Pearson correlation coefficients are displayed in **Table A.5.** For most items, these range between .44 and .60; for the persuasive writing task used at ages 13 and 17 (Split Sessions), the relationship was consistently lower, ranging between .29 and .34. These correlations suggest that the two measures, while related, reflect somewhat different aspects of students' writing achievement. The holistic score is discussed as a general measure of writing fluency in this report, since the general impression marks that readers give are affected by such diverse factors as organization, adherence to the conventions of written English, word choice, handwriting, and quality of the ideas. The primary trait score, which is tied more closely to the features of specific writing tasks, is discussed as a measure of success in accomplishing the specifically assigned purpose of the writing.

Pearson Correlation Coefficients Between Primary Trait (Task Accomplishment) and Holistic (Overall Fluency) Scores

Table A.5

	1974 Ages			1979 Ages			1984 Ages		
	9	13	17	9	13	17	9	13	17
Hole in the Box	.59	.45	.45	.51	.44	.54	.47	.48	.58
Dali	—	—	—	.57	.51	.57	.56	.54	.60
Aunt May	—	—	—	.46	—	—	.50	—	—
Split Sessions	—	—	—	—	.29	.31	—	.32	.34

NAEP Reporting Groups

NAEP does not report results for individual students. It only reports performance for groups of students. In addition to national results, this report contains information about subgroups defined by sex, race/ethnicity, and region of the country. Definitions of these groups follow.

Sex

Results are reported for males and females.

Race/Ethnicity

Results are presented for Black, White, and (since 1975) Hispanic students. For all three assessments, results are based on observed racial/ethnic identifications made by assessment administrators.

Region*

The country has been divided into four regions: Northeast, Southeast, Central, and West. States included in each region are shown on the map below.

*Trend data for regions of the country are available from NAEP, CN 6710, Princeton, NJ 08541-6710.

Data Collection

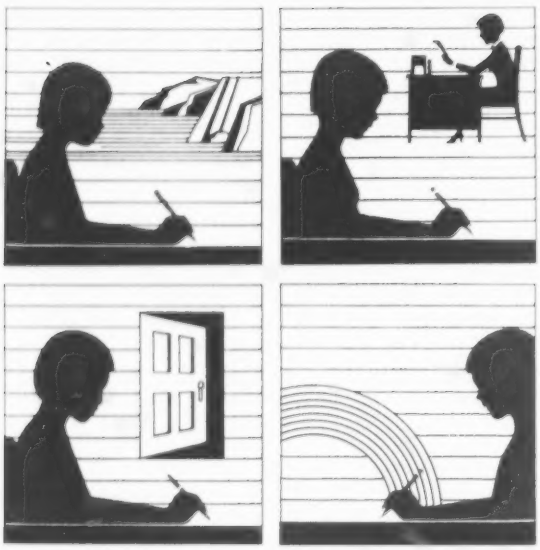
NAEP assessments are always administered using a well-trained, professional data collection staff. NAEP's subcontractor for data collection for the first three assessments was Research Triangle Institute. The subcontractor responsible for the 1984 assessment as well as the 1986 assessment is WESTAT, Inc. Quality control is provided through site visits by NAEP and WESTAT staffs.

Estimating Variability

The standard error, computed using a jackknife replication procedure, provides an estimate of sampling reliability for NAEP measures. It is composed of sampling error and other random error associated with the assessment of a specific item or set of items. Random error includes all possible nonsystematic error associated with administering specific exercise items to specific students in specific situations. In the Data Appendix, results for 1974 and 1979 are asterisked (*) if they are significantly different at the .05 level from the 1984 result.

A Note About Interpretations

Interpreting the results—attempting to put them into a "real world" context, advancing plausible explanations of effects, and suggesting possible courses of action—will always be an art, not a science. No one can control all the possible variables affecting a survey. Also, any particular change in achievement may be explained in many ways or perhaps not at all. The interpretative remarks in this report represent the professional judgments of NAEP staff and consultants and must stand the tests of reason and the reader's knowledge and experience. The conjectures may not always be correct, but they are a way of stimulating the debate that is necessary to achieve a full understanding of the results and implement appropriate action.



Data Appendix

NAEP Writing Assessment Trend Results

Age 9

MEANS, PERCENTAGES, AND JACKKNIFED STANDARD ERRORS FOR PRIMARY TRAIT AND HOLISTIC SCORES

DALI: PRIMARY TRAIT SCORE

		N (C.V.)	Non-Rateable (0)	Unsatisfactory (1)	Minimal (2)	Adequate (3)	Elaborated (4)	Minimal or Better (2,3,4)	Adequate or Better (3,4)	MEAN
—TOTAL—	1979	2482 (8%)	2 4 (0 4)	44 2 (2 1)	49 2 (2 0)	4 2 (0 5)	0 0 (0 0)	53 4 (2 2)	4 2 (0 5)	1 6 (0 0)
	1984	1351 (5%)	1 3 (0 4)	43 0 (2 0)	52 8 (1 7)	2 8 (0 8)	0 0 (0 0)	55 7 (2 1)	2 8 (0 8)	1 6 (0 0)
SEX										
MALE	1979	1209 (8%)	3 8 (0 7)*	49 0 (2 5)	44 4 (2 5)	2 7 (0 5)	0 0 (0 0)	47 1 (2 6)	2 7 (0 5)	1 5 (0 0)
	1984	697 (7%)	1 1 (0 3)	47 9 (2 8)	49 2 (2 6)	1 7 (0 8)	0 0 (0 0)	50 9 (2 8)	1 7 (0 8)	1 5 (0 0)
FEMALE	1979	1273 (8%)	1 1 (0 4)	39 5 (2 3)	53 8 (2 0)	5 7 (0 8)	0 0 (0 0)	59 4 (2 3)	5 7 (0 8)	1 6 (0 0)
	1984	654 (6%)	1 6 (0 7)	37 8 (2 2)	56 6 (1 8)	4 0 (1 2)	0 0 (0 0)	60 7 (2 2)	4 0 (1 2)	1 6 (0 0)
OBSERVED ETHNICITY/RACE										
WHITE	1979	1772 (9%)	1 2 (0 3)	40 4 (2 3)	53 4 (2 1)	5 0 (0 6)	0 0 (0 0)	58 4 (2 4)	5 0 (0 6)	1 6 (0 0)
	1984	976 (8%)	0 7 (0 3)	39 6 (2 5)	56 2 (2 1)	3 4 (1 1)	0 0 (0 0)	59 7 (2 5)	3 4 (1 1)	1 6 (0 0)
BLACK	1979	502 (13%)	6 6 (1 4)	59 9 (2 7)	32 7 (3 5)	0 9 (0 5)	0 0 (0 0)	33 5 (3 4)	0 9 (0 5)	1 3 (0 0)
	1984	251 (21%)†	3 6 (1 0)	60 4 (4 5)	36 0 (4 4)	0 0 (0 0)	0 0 (0 0)	36 0 (4 4)	0 0 (0 0)	1 3 (0 0)
HISPANIC	1979	155 (25%)†	9 8 (4 5)	61 1 (6 3)*	28 2 (4 2)*	0 9 (0 6)	0 0 (0 0)	29 1 (4 1)*	0 9 (0 6)	1 2 (0 1)*
	1984	92 (35%)†	4 7 (4 8)	43 5 (3 3)	49 7 (6 0)	2 1 (2 1)	0 0 (0 0)	51 9 (6 5)	2 1 (2 1)	1 5 (0 1)

DALI: HOLISTIC SCORE

		(0)	(1)	(2)	(3)	(4)	(5)	(6)	(4,5,6)	MEAN
—TOTAL—	1979	1 2 (0 3)	18 9 (1 7)	24 9 (1 6)	25 8 (1 4)	16 9 (1 3)	8 4 (1 0)	3 9 (0 8)	29 1 (2 3)	2 8 (0 1)
	1984	0 6 (0 2)	17 9 (1 9)	22 5 (1 6)	24 5 (1 2)	20 0 (1 6)	10 7 (1 2)	3 7 (1 0)	34 5 (3 0)	2 9 (0 1)
SEX										
MALE	1979	1 7 (0 5)	23 3 (2 4)	27 1 (1 4)	25 0 (1 9)	14 7 (1 5)	6 5 (1 3)	1 7 (0 4)	22 9 (2 4)	2 5 (0 1)
	1984	0 7 (0 3)	23 7 (2 5)	25 2 (2 0)	24 3 (1 4)	17 1 (2 0)	7 6 (1 8)	1 4 (0 5)	26 1 (3 7)	2 6 (0 1)
FEMALE	1979	0 7 (0 2)	14 7 (1 4)	22 9 (1 8)	26 7 (1 6)	19 1 (1 7)	10 1 (1 1)*	5 9 (1 3)	35 1 (2 7)*	3 0 (0 1)
	1984	0 4 (0 3)	11 9 (1 6)	19 8 (1 8)	24 7 (1 8)	23 1 (2 0)	14 0 (1 0)	6 2 (1 6)	43 3 (2 9)	3 2 (0 1)
OBSERVED ETHNICITY/RACE										
WHITE	1979	0 3 (0 1)	15 1 (1 6)	23 6 (1 2)	27 7 (1 4)	19 2 (1 3)	9 5 (1 1)	4 6 (1 0)	33 2 (2 3)	3 0 (0 1)
	1984	0 3 (0 2)	16 1 (2 1)	21 5 (1 7)	24 4 (1 6)	21 3 (1 9)	12 0 (1 5)	4 4 (1 3)	37 7 (3 5)	3 0 (0 1)
BLACK	1979	3 3 (0 8)*	38 2 (4 1)	28 0 (3 0)	18 2 (2 0)	8 3 (2 2)*	3 3 (1 9)	0 6 (0 4)	12 3 (2 8)*	2 0 (0 1)*
	1984†	1 4 (0 3)	28 3 (3 7)	28 8 (2 8)	21 2 (2 4)	14 2 (1 9)	5 0 (1 1)	1 2 (0 7)	20 3 (2 0)	2 4 (0 1)
HISPANIC	1979†	9 4 (4 1)	27 7 (4 4)	33 5 (8 4)	19 6 (5 9)	5 5 (2 9)*	4 3 (1 7)	0 0 (0 0)	9 7 (3 3)*	2 0 (0 1)*
	1984†	2 7 (2 8)	18 5 (2 4)	21 9 (5 0)	31 1 (4 3)	16 5 (3 2)	8 0 (3 3)	1 3 (1 1)	25 8 (5 0)	2 7 (0 2)

AUNT MAY: PRIMARY TRAIT SCORE

		N (C.V.)	Non-Rateable (0)	Unsatisfactory (1)	Minimal (2)	Adequate (3)	Elaborated (4)	Minimal or Better (2,3,4)	Adequate or Better (3,4)	MEAN
—TOTAL—	1979	2525 (7%)	2 2 (0 4)	34 1 (1 6)	26 2 (1 2)	35 7 (1 5)	1 7 (0 3)	63 7 (1 7)	37 5 (1 6)	2 0 (0 0)
	1984	1356 (5%)	3 5 (0 6)	38 3 (2 2)	24 3 (1 6)	32 8 (2 1)	1 1 (0 5)	58 2 (2 3)	34 0 (2 2)	1 9 (0 0)
SEX										
MALE	1979	1259 (8%)	2 9 (0 6)	38 3 (2 2)	26 9 (1 8)	31 1 (1 9)	0 8 (0 3)	58 8 (2 3)*	31 9 (1 9)	1 9 (0 0)
	1984	701 (7%)	4 5 (0 9)	44 4 (2 7)	22 5 (2 2)	28 2 (2 7)	0 4 (0 3)	51 1 (2 8)	28 6 (2 7)	1 8 (0 1)
FEMALE	1979	1266 (8%)	1 5 (0 4)	29 8 (2 0)	25 6 (1 6)	40 4 (. 9)	2 7 (0 5)	68 7 (2 1)	43 1 (2 0)	2 1 (0 0)
	1984	655 (6%)	2 4 (0 5)	31 8 (2 4)	26 2 (1 9)	37 8 (2 3)	1 9 (0 8)	65 8 (2 5)	39 6 (2 3)	2 0 (0 0)
OBSERVED ETHNICITY/RACE										
WHITE	1979	1870 (9%)	1 5 (0 3)	30 5 (1 4)	27 0 (1 4)	39 0 (1 4)	2 0 (0 3)	68 0 (1 4)	41 0 (1 5)	2 1 (0 0)
	1984	978 (8%)	2 4 (0 5)	35 0 (2 6)	24 3 (1 9)	36 9 (2 3)	1 4 (0 6)	62 6 (2 6)	38 3 (2 5)	2 0 (0 1)
BLACK	1979	487 (16%)	4 5 (1 3)	51 4 (3 6)	22 8 (2 5)	20 5 (2 4)	0 8 (0 4)*	44 1 (3 2)	21 3 (2 4)	1 6 (0 1)
	1984	253 (21%)†	6 6 (1 8)	53 3 (2 9)	23 0 (2 4)	17 1 (2 7)	0 0 (0 0)	40 1 (3 4)	17 1 (2 7)	1 5 (0 1)
HISPANIC	1979	114 (26%)†	6 8 (2 2)	47 8 (6 2)	24 3 (4 0)	20 0 (6 5)	1 1 (1 1)	45 4 (7 2)	21 1 (6 9)	1 6 (0 2)
	1984	93 (35%)†	9 4 (6 0)	39 7 (6 3)	32 4 (6 2)	18 5 (6 4)	0 0 (0 0)	50 9 (11 4)	18 5 (6 4)	1 6 (0 2)

*SIGNIFICANTLY DIFFERENT FROM 1984
(ALPHA = .05 FOR THE COMPARISON WITHIN EACH COLUMN)
†INTERPRET WITH CAUTION. STANDARD ERRORS ARE POORLY ESTIMATED

Age 9

MEANS, PERCENTAGES, AND JACKKNIFED STANDARD ERRORS FOR PRIMARY TRAIT AND HOLISTIC SCORES

AUNT MAY: HOLISTIC SCORE

		(0)	(1)	(2)	(3)	(4)	(5)	(6)	(4,5,6)	MEAN
TOTAL	1979	1.4 (0.3)	10.9 (1.3)	22.2 (1.3)	30.2 (1.3)	21.0 (1.0)	10.5 (1.0)	3.8 (0.7)	35.2 (2.1)*	3.0 (0.1)*
	1984	2.2 (0.5)	12.9 (1.6)	26.5 (1.8)	28.6 (1.8)	18.6 (1.2)	7.8 (1.0)	3.3 (0.6)	29.7 (1.9)	2.8 (0.1)
SEX										
MALE	1979	1.7 (0.5)	15.1 (1.8)	24.9 (1.8)*	30.6 (1.6)	18.3 (1.3)*	7.1 (1.0)*	2.3 (0.9)	27.7 (2.3)*	2.8 (0.1)*
	1984	3.1 (0.8)	17.7 (1.9)	34.2 (2.6)	26.8 (2.8)	13.4 (1.5)	3.7 (0.7)	1.2 (0.6)	18.2 (1.9)	2.5 (0.1)
FEMALE	1979	1.1 (0.4)	6.7 (1.0)	19.6 (1.5)	29.8 (1.9)	23.8 (1.5)	13.8 (1.6)	5.2 (0.8)	42.8 (2.7)	3.3 (0.1)
	1984	1.4 (0.4)	7.9 (1.5)	18.3 (1.8)	30.5 (2.0)	24.2 (2.2)	12.2 (1.8)	5.4 (1.1)	41.9 (2.6)	3.3 (0.1)
OBSERVED ETHNICITY/RACE										
WHITE	1979	0.9 (0.3)	9.5 (1.2)	20.9 (1.3)	30.6 (1.5)	21.6 (1.1)	12.0 (1.2)	4.5 (0.9)	38.1 (2.4)	3.2 (0.1)
	1984	1.4 (0.4)	10.2 (1.5)	25.3 (2.2)	30.6 (1.9)	20.1 (1.2)	8.7 (1.3)	3.7 (0.8)	32.5 (2.0)	3.0 (0.1)
BLACK	1979	3.7 (1.4)	16.2 (3.0)*	27.3 (3.5)	29.6 (3.2)*	17.9 (2.8)*	4.2 (1.2)	1.2 (0.5)	23.2 (3.6)	2.6 (0.1)*
	1984 !	4.6 (1.6)	26.2 (2.2)	31.5 (2.2)	20.4 (2.5)	10.8 (1.6)	4.8 (1.3)	1.7 (1.2)	17.3 (1.9)	2.3 (0.1)
HISPANIC	1979 !	3.6 (1.9)	23.2 (4.8)	31.7 (6.1)	24.7 (4.8)	13.6 (3.9)	3.0 (1.9)	0.2 (0.2)	16.8 (4.4)	2.3 (0.1)
	1984 !	6.6 (3.8)	16.3 (9.0)	28.1 (6.1)	29.5 (5.5)	15.0 (4.1)	2.3 (1.7)	2.2 (1.7)	19.5 (5.5)	2.5 (0.3)

HOLE IN THE BOX: PRIMARY TRAIT SCORE

		N (C.V.)	Non-Rateable (0)	Unsatis-factory (1)	Minimal (2)	Adequate (3)	Elaborated (4)	Minimal or Better (2,3,4)	Adequate or Better (3,4)	MEAN
TOTAL	1974	2543 (5%)	12.1 (1.0)*	51.2 (1.4)*	35.0 (1.4)*	1.7 (0.3)*	0.0 (0.0)	36.7 (1.3)*	1.7 (0.3)*	1.3 (0.0)*
	1979	2464 (7%)	7.6 (1.0)	51.1 (1.3)*	39.3 (1.3)*	2.1 (0.4)*	0.0 (0.0)	41.4 (1.4)*	2.1 (0.4)*	1.4 (0.0)*
	1984	1344 (7%)	4.9 (0.8)	40.6 (1.8)	49.4 (2.1)	5.1 (0.7)	0.1 (0.1)	54.6 (2.2)	5.2 (0.7)	1.5 (0.0)
SEX										
MALE	1974	1280 (5%)	15.5 (1.5)*	53.6 (1.9)*	30.2 (1.7)*	0.7 (0.2)*	0.0 (0.0)	30.9 (1.7)*	0.7 (0.2)*	1.2 (0.0)*
	1979	1242 (7%)	9.8 (1.2)	53.4 (1.9)*	35.7 (1.8)*	1.0 (0.4)*	0.0 (0.0)	36.8 (1.9)*	1.0 (0.4)*	1.3 (0.0)*
	1984	653 (9%)	7.0 (1.6)	42.3 (2.4)	47.6 (3.1)	3.1 (0.6)	0.0 (0.0)	50.7 (3.1)	3.1 (0.6)	1.5 (0.0)
FEMALE	1974	1263 (5%)	8.7 (0.9)*	48.7 (1.6)*	39.8 (1.7)*	2.8 (0.5)*	0.0 (0.0)	42.6 (1.6)*	2.8 (0.5)*	1.4 (0.0)*
	1979	122[illegible] (7%)	5.2 (1.0)	48.7 (1.8)*	42.9 (1.7)*	3.1 (0.6)*	0.0 (0.0)	46.1 (1.8)*	3.1 (0.6)*	1.4 (0.0)*
	1984	691 (8%)	2.9 (0.8)	38.9 (2.4)	51.0 (2.2)	7.0 (1.1)	0.1 (0.1)	58.2 (2.6)	7.1 (1.1)	1.6 (0.0)
OBSERVED ETHNICITY/RACE										
WHITE	1974	1947 (6%)	8.9 (1.0)*	49.8 (1.5)*	39.3 (1.5)*	2.0 (0.3)*	0.0 (0.0)	41.3 (1.4)*	2.0 (0.3)*	1.3 (0.0)*
	1979	1820 (9%)	5.7 (0.7)	50.7 (1.5)*	41.8 (1.5)*	1.8 (0.4)*	0.0 (0.0)	43.6 (1.5)*	1.8 (0.4)*	1.4 (0.0)*
	1984	928 (10%)	3.6 (1.0)	39.1 (1.9)	51.6 (2.2)	5.6 (0.8)	0.1 (0.1)	57.3 (2.3)	5.7 (0.8)	1.6 (0.0)
BLACK	1974	421 (13%)	23.1 (2.2)*	59.6 (4.1)	17.3 (2.8)*	0.0 (0.0)	0.0 (0.0)	17.3 (2.8)*	0.0 (0.0)	0.9 (0.0)*
	1979	477 (13%)	15.1 (2.2)*	55.0 (2.9)	28.1 (3.1)	1.8 (0.8)	0.0 (0.0)	29.9 (3.0)	1.8 (0.8)	1.2 (0.0)*
	1984	220 (23%) !	6.4 (1.5)	48.9 (7.4)	41.2 (6.8)	3.5 (1.6)	0.0 (0.0)	44.8 (7.5)	3.5 (1.6)	1.4 (0.1)
HISPANIC	1974	153 (15%) !	30.0 (4.7)	47.6 (3.7)	20.2 (3.5)	2.2 (1.1)	0.0 (0.0)	22.4 (3.8)	2.2 (1.1)	0.9 (0.1)
	1979	122 (24%) !	18.6 (7.8)	44.8 (5.7)	30.3 (5.9)	6.3 (3.5)	0.0 (0.0)	36.6 (8.3)	6.3 (3.5)	1.2 (0.2)
	1984	162 (41%) !	13.1 (6.9)	40.8 (7.7)	43.0 (12.2)	3.2 (2.9)	0.0 (0.0)	46.2 (14.4)	3.2 (2.9)	1.4 (0.2)

HOLE IN THE BOX: HOLISTIC SCORE

		(0)	(1)	(2)	(3)	(4)	(5)	(6)	(4,5,6)	MEAN
TOTAL	1974	8.3 (0.8)*	14.9 (1.3)*	23.5 (1.3)	23.5 (1.0)	17.6 (0.9)	8.9 (1.0)	3.4 (0.6)	29.9 (1.7)	2.7 (0.1)*
	1979	4.6 (0.9)	13.8 (1.0)*	25.7 (1.7)	28.1 (1.8)	17.7 (1.3)	7.5 (1.0)	2.5 (0.6)	27.7 (2.2)	2.7 (0.1)*
	1984	2.7 (0.7)	9.4 (1.0)	25.8 (2.1)	28.1 (1.8)	17.3 (1.3)	11.2 (1.4)	5.5 (1.7)	34.0 (3.1)	3.0 (0.1)
SEX										
MALE	1974	10.9 (1.3)*	19.9 (1.9)*	26.3 (1.6)	23.0 (1.5)	13.3 (1.0)	4.8 (0.7)	1.8 (0.4)	19.9 (1.3)	2.3 (0.1)*
	1979	6.1 (1.1)	17.6 (1.5)	29.9 (2.0)	27.6 (1.9)	13.3 (1.7)	4.2 (0.8)*	1.3 (0.6)	18.8 (2.3)	2.4 (0.1)*
	1984	4.4 (1.4)	13.8 (1.5)	27.4 (2.3)	27.2 (2.7)	16.0 (1.7)	8.5 (1.7)	2.6 (0.7)	27.1 (3.0)	2.7 (0.1)
FEMALE	1974	5.6 (0.6)*	10.0 (1.3)*	20.6 (1.5)	24.0 (1.2)	22.0 (1.2)	12.9 (1.6)	4.9 (0.9)	39.8 (2.3)	3.1 (0.1)
	1979	3.1 (1.0)	10.0 (1.2)*	21.5 (2.0)	28.6 (2.5)	22.3 (1.6)	10.8 (1.8)	3.8 (0.9)	36.9 (2.6)	3.0 (0.1)
	1984	1.1 (0.4)	5.3 (1.0)	24.2 (2.4)	28.9 (1.9)	18.5 (2.0)	13.8 (1.7)	8.3 (2.8)	40.5 (3.5)	3.3 (0.1)
OBSERVED ETHNICITY/RACE										
WHITE	1974	6.6 (0.8)*	12.3 (1.3)*	22.5 (1.4)	24.6 (1.1)	19.8 (1.0)	10.2 (1.2)	4.0 (0.7)	34.0 (1.9)	2.9 (0.1)*
	1979	3.4 (0.6)	12.4 (1.2)*	24.0 (2.0)	29.2 (2.1)	19.4 (1.7)	8.5 (1.1)*	3.0 (0.7)	30.9 (2.7)	2.9 (0.1)*
	1984	2.4 (0.6)	7.0 (1.0)	20.7 (1.8)	30.1 (2.4)	19.1 (1.5)	13.6 (1.6)	7.0 (2.1)	39.8 (3.3)	3.3 (0.1)
BLACK	1974	13.0 (1.8)*	28.3 (2.2)*	27.5 (2.6)*	21.2 (2.7)	7.4 (1.3)	2.6 (1.1)	0.0 (0.0)	10.1 (1.8)	1.9 (0.1)*
	1979	9.3 (2.8)*	21.4 (3.1)	30.2 (2.9)*	23.3 (3.3)	12.5 (1.5)	2.8 (1.3)	0.4 (0.3)	15.7 (2.3)	2.2 (0.1)
	1984 !	1.6 (0.9)	16.5 (3.6)	44.8 (4.7)	22.2 (3.6)	10.3 (1.9)	4.1 (2.0)	0.5 (0.5)	14.9 (2.9)	2.4 (0.1)
HISPANIC	1974	21.0 (4.3)	20.8 (4.2)	29.6 (3.4)	11.0 (2.2)*	9.6 (2.7)	5.9 (2.1)	2.1 (1.3)	17.6 (4.0)	1.9 (0.2)
	1979 !	11.1 (8.9)	17.4 (3.3)	36.7 (8.1)	19.1 (5.3)	10.6 (3.7)	3.8 (2.2)	1.4 (1.0)	15.8 (5.7)	2.2 (0.3)
	1984 !	8.1 (5.4)	18.2 (9.0)	33.7 (6.0)	24.0 (4.1)	10.5 (5.4)	4.0 (3.3)	1.6 (1.3)	16.1 (8.9)	2.3 (0.5)

Age 13

MEANS, PERCENTAGES, AND JACKKNIFED STANDARD ERRORS FOR PRIMARY TRAIT AND HOLISTIC SCORES

DALI: PRIMARY TRAIT SCORE

		N (C.V.)	Non-Rateable (0)	Unsatisfactory (1)	Minimal (2)	Adequate (3)	Elaborated (4)	Minimal or Better (2,3,4)	Adequate or Better (3,4)	MEAN
—TOTAL—	1979	2496 (7%)	1.1 (0.2)*	24.5 (1.5)*	60.8 (1.4)	13.5 (1.0)	0.2 (0.1)*	74.4 (1.6)*	13.7 (1.0)*	1.9 (0.0)*
	1984	1275 (8%)	0.4 (0.1)	18.2 (1.5)	62.6 (1.7)	17.3 (1.8)	1.5 (0.6)	81.4 (1.5)	18.8 (2.3)	2.0 (0.0)
SEX										
MALE	1979	1255 (8%)	1.4 (0.4)	30.1 (2.4)*	58.7 (2.3)	9.8 (1.3)	0.0 (0.0)	68.5 (2.5)*	9.8 (1.3)	1.8 (0.0)*
	1984	636 (10%)	0.6 (0.2)	20.7 (2.2)	64.4 (2.0)	14.0 (2.1)	0.3 (0.2)	78.6 (2.2)	14.2 (2.1)	1.9 (0.0)
FEMALE	1979	1241 (7%)	0.7 (0.4)	18.7 (1.3)	62.9 (1.6)	17.3 (1.3)	0.3 (0.2)	80.6 (1.3)	17.6 (1.4)	2.0 (0.0)*
	1984	638 (8%)	0.1 (0.1)	15.6 (2.5)	60.8 (2.8)	20.6 (2.0)	2.8 (1.3)	84.2 (2.5)	23.4 (2.9)	2.1 (0.1)
OBSERVED ETHNICITY/RACE										
WHITE	1979	1781 (8%)	0.7 (0.2)*	22.0 (1.6)*	61.6 (1.6)	15.6 (1.2)*	0.1 (0.1)*	77.3 (1.6)*	15.7 (1.2)*	1.9 (0.0)*
	1984	923 (10%)	0.2 (0.1)	14.9 (1.5)	62.8 (2.0)	20.4 (1.9)	1.7 (0.6)	84.9 (1.5)	22.1 (2.4)	2.1 (0.0)
BLACK	1979	538 (12%)	2.5 (0.8)	36.8 (2.9)	57.1 (2.8)	3.2 (0.7)	0.3 (0.3)	60.6 (3.0)	3.5 (0.9)	1.6 (0.0)
	1984	227 (17%)	1.2 (0.6)	34.4 (4.2)	57.8 (3.4)	5.1 (1.8)	1.5 (1.2)	64.4 (4.2)	6.5 (2.8)	1.7 (0.1)
HISPANIC	1979	121 (18%)	3.0 (1.5)	31.7 (8.4)	57.8 (7.7)	7.5 (3.0)	0.0 (0.0)	65.3 (8.5)	7.5 (3.0)	1.7 (0.1)
	1984	85 (38%)!	0.4 (0.4)	20.8 (6.7)	74.9 (6.5)	3.9 (3.0)	0.0 (0.0)	78.8 (6.6)	3.9 (3.0)	1.6 (0.1)

DALI: HOLISTIC SCORE

		(0)	(1)	(2)	(3)	(4)	(5)	(6)	(4,5,6)	MEAN
—TOTAL—	1979	0.7 (0.2)	8.9 (0.9)	22.6 (1.3)	31.5 (1.6)	24.9 (1.3)	9.0 (0.7)	2.4 (0.5)	36.3 (1.6)	3.1 (0.0)
	1984	0.3 (0.2)	7.5 (0.8)	22.8 (1.6)	30.1 (1.5)	25.7 (1.5)	9.6 (1.3)	4.0 (0.8)	39.3 (2.7)	3.2 (0.1)
SEX										
MALE	1979	0.9 (0.3)	13.1 (1.7)	26.9 (1.7)	32.4 (1.9)	18.5 (1.5)	6.4 (0.7)	1.9 (0.5)	26.8 (1.7)	2.8 (0.1)
	1984	0.5 (0.3)	10.4 (1.2)	29.5 (2.2)	30.6 (2.0)	19.2 (1.8)	7.5 (1.4)	2.3 (0.7)	29.1 (3.0)	2.9 (0.1)
FEMALE	1979	0.5 (0.3)	4.6 (0.7)	18.2 (1.6)	30.6 (1.8)	31.5 (1.7)	11.6 (1.2)	3.0 (0.7)	46.1 (2.1)	3.3 (0.1)
	1984	0.2 (0.2)	4.5 (0.8)	16.1 (1.7)	29.6 (2.0)	32.1 (1.9)	11.7 (1.8)	5.8 (1.5)	49.6 (3.1)	3.5 (0.1)
OBSERVED ETHNICITY/RACE										
WHITE	1979	0.6 (0.2)	6.5 (1.0)	20.3 (1.5)	32.6 (1.8)	26.8 (1.5)	10.3 (0.8)	2.9 (0.5)	40.0 (1.8)	3.2 (0.0)
	1984	0.2 (0.1)	5.2 (0.9)	19.5 (1.7)	30.6 (1.5)	28.7 (1.6)	11.1 (1.4)	4.6 (0.9)	44.4 (2.9)	3.3 (0.1)
BLACK	1979	0.8 (0.4)	23.3 (2.4)	32.7 (2.5)	26.4 (2.4)	14.1 (1.9)	2.5 (0.7)	0.3 (0.3)	16.9 (2.1)	2.4 (0.1)
	1984	0.7 (0.7)	21.3 (2.4)	33.6 (3.9)	25.8 (3.3)	14.0 (3.0)	2.0 (0.9)	2.6 (1.6)	18.6 (4.4)	2.5 (0.1)
HISPANIC	1979	2.5 (1.4)	12.6 (4.0)*	32.4 (6.3)	31.4 (5.6)	16.7 (4.2)	2.4 (1.8)	2.1 (1.5)	21.1 (5.2)	2.6 (0.2)
	1984!	0.4 (0.4)	3.2 (2.1)	33.6 (5.7)	36.8 (5.0)	19.2 (4.8)	6.9 (3.8)	0.0 (0.0)	26.1 (5.9)	2.9 (0.1)

SPLIT SESSION: PRIMARY TRAIT SCORE

		N (C.V.)	Non-Rateable (0)	Unsatisfactory (1)	Minimal (2)	Adequate (3)	Elaborated (4)	Minimal or Better (2,3,4)	Adequate or Better (3,4)	MEAN
—TOTAL—	1979	2735 (6%)	0.8 (0.2)	71.4 (1.4)*	21.8 (1.1)	5.8 (0.6)*	0.1 (0.1)	27.8 (1.5)*	6.0 (0.6)*	1.3 (0.0)*
	1984	1276 (8%)	0.9 (0.2)	65.0 (2.2)	24.5 (1.9)	9.3 (1.2)	0.3 (0.2)	34.1 (2.2)	9.6 (1.3)	1.4 (0.0)
SEX										
MALE	1979	1346 (6%)	1.2 (0.4)	71.0 (1.8)	22.8 (1.5)	5.0 (0.8)*	0.1 (0.1)	27.8 (1.8)	5.0 (0.8)*	1.3 (0.0)
	1984	636 (10%)	1.5 (0.4)	64.9 (2.9)	25.2 (2.6)	8.4 (1.5)	0.0 (0.0)	33.6 (3.0)	8.5 (1.5)	1.4 (0.0)
FEMALE	1979	1389 (6%)	0.4 (0.1)	71.8 (1.8)*	21.0 (1.3)	6.7 (0.9)	0.2 (0.1)	27.9 (1.8)*	6.9 (0.9)*	1.3 (0.0)*
	1984	639 (8%)	0.3 (0.2)	65.1 (2.2)	23.9 (1.8)	10.2 (1.6)	0.5 (0.3)	34.6 (2.2)	10.7 (1.5)	1.5 (0.0)
OBSERVED ETHNICITY/RACE										
WHITE	1979	2087 (6%)	0.4 (0.2)	69.5 (1.4)*	23.0 (1.2)	6.8 (0.7)*	0.2 (0.1)	30.1 (1.4)*	7.0 (0.7)*	1.4 (0.0)*
	1984	923 (10%)	0.4 (0.2)	62.6 (1.9)	26.0 (1.6)	10.6 (1.4)	0.4 (0.2)	37.0 (1.9)	11.0 (1.5)	1.5 (0.0)
BLACK	1979	438 (15%)	1.9 (0.7)	79.8 (2.7)	16.3 (2.3)	1.9 (0.7)	0.0 (0.0)	18.2 (2.5)	1.9 (0.7)	1.2 (0.0)
	1984	228 (17%)	3.6 (1.2)	70.2 (5.9)	20.4 (4.4)	5.9 (2.1)	0.0 (0.0)	26.2 (5.7)	5.9 (2.1)	1.3 (0.1)
HISPANIC	1979	148 (21%)!	3.1 (1.5)	78.3 (5.3)	17.0 (5.0)	1.6 (0.9)	0.0 (0.0)	18.6 (5.2)	1.6 (0.9)	1.2 (0.1)
	1984	85 (38%)!	0.4 (0.4)	79.7 (8.1)	17.8 (9.6)	2.1 (2.2)	0.0 (0.0)	19.9 (8.0)	2.1 (2.2)	1.2 (0.1)

*SIGNIFICANTLY DIFFERENT FROM 1984
(ALPHA = .05 FOR THE COMPARISON WITHIN EACH COLUMN)
!INTERPRET WITH CAUTION. STANDARD ERRORS ARE POORLY ESTIMATED

Age 13

MEANS, PERCENTAGES, AND JACKKNIFED STANDARD ERRORS FOR PRIMARY TRAIT AND HOLISTIC SCORES

SPLIT SESSION: HOLISTIC SCORE

		(0)	(1)	(2)	(3)	(4)	(5)	(6)	(4,5,6)	MEAN
—TOTAL—	1979	0.4 (0.1)	11.2 (1.1)	29.5 (1.5)*	32.4 (1.3)	18.7 (1.3)*	5.9 (0.8)	1.9 (0.3)	26.4 (1.8)*	2.8 (0.1)
	1984	0.7 (0.2)	9.3 (1.1)	24.7 (1.3)	33.2 (1.6)	23.2 (1.3)	6.7 (1.0)	2.1 (0.5)	32.0 (1.9)	3.0 (0.1)
SEX										
MALE	1979	0.6 (0.2)	16.7 (1.8)	35.7 (1.4)*	29.8 (1.7)	12.9 (1.5)	3.6 (0.7)	0.7 (0.2)	17.2 (1.8)	2.5 (0.1)
	1984	1.1 (0.4)	13.4 (1.5)	30.7 (1.7)	33.8 (1.9)	16.2 (1.8)	3.6 (0.7)	1.2 (0.5)	21.0 (2.2)	2.7 (0.1)
FEMALE	1979	0.3 (0.1)	5.9 (0.9)	23.5 (1.8)*	35.0 (1.5)	24.1 (1.7)*	8.1 (1.1)	3.0 (0.5)	35.3 (2.2)*	3.1 (0.1)
	1984	0.2 (0.1)	5.3 (1.4)	18.8 (1.6)	32.6 (2.5)	30.2 (1.6)	9.9 (1.8)	3.0 (0.8)	43.2 (2.7)	3.3 (0.1)
OBSERVED ETHNICITY/RACE										
WHITE	1979	0.2 (0.1)	9.0 (1.0)	28.4 (1.5)*	33.7 (1.4)	19.9 (1.5)*	6.7 (0.9)	2.1 (0.4)	28.7 (2.0)*	2.9 (0.1)*
	1984	0.2 (0.1)	6.8 (1.1)	23.0 (1.6)	34.0 (1.9)	25.4 (1.6)	8.0 (1.1)	2.6 (0.7)	36.0 (2.1)	3.1 (0.1)
BLACK	1979	1.5 (0.6)	21.1 (2.9)	37.4 (2.9)	25.5 (3.1)	10.9 (2.0)	2.7 (0.8)	0.8 (0.4)	14.5 (2.6)	2.3 (0.1)
	1984	3.2 (1.2)	21.4 (3.2)	30.4 (2.5)	27.4 (3.4)	14.3 (2.9)	2.9 (1.6)	0.4 (0.4)	17.7 (3.7)	2.4 (0.1)
HISPANIC	1979!	0.6 (0.3)	21.2 (4.9)	30.4 (5.1)	28.3 (4.2)	17.4 (5.3)	2.1 (1.2)	0.0 (0.0)	19.5 (5.3)	2.5 (0.1)
	1984!	0.4 (0.4)	11.5 (2.8)	33.3 (3.7)	38.6 (3.4)	14.7 (5.3)	0.7 (0.8)	0.8 (0.9)	16.2 (5.4)	2.6 (0.1)

HOLE IN THE BOX: PRIMARY TRAIT SCORE

		N (C.V.)	Non-Rateable (0)	Unsatis-factory (1)	Minimal (2)	Adequate (3)	Elaborated (4)	Minimal or Better (2,3,4)	Adequate or Better (3,4)	MEAN
—TOTAL—	1974	2513 (3%)	2.2 (0.4)	28.8 (1.5)	53.1 (1.3)	14.2 (1.0)	1.7 (0.4)	69.0 (1.5)	15.9 (1.1)	1.8 (0.0)
	1979	2782 (5%)	2.2 (0.3)	37.0 (1.5)	48.9 (1.6)	10.7 (1.0)*	1.1 (0.3)	60.7 (1.6)	11.8 (1.1)*	1.7 (0.0)*
	1984	1289 (5%)	1.8 (0.5)	31.5 (2.1)	49.9 (1.6)	14.8 (1.3)	2.0 (0.4)	66.7 (2.2)	16.8 (1.5)	1.8 (0.0)
SEX										
MALE	1974	1228 (4%)	3.9 (0.7)	32.6 (1.7)	51.9 (1.8)	10.4 (1.1)	1.2 (0.4)	63.5 (1.8)	11.6 (1.3)	1.7 (0.0)
	1979	1408 (6%)	3.1 (0.6)	41.2 (1.8)	47.0 (1.8)	8.0 (0.9)*	0.7 (0.4)	55.8 (2.0)	8.7 (1.1)	1.6 (0.0)
	1984	680 (6%)	2.4 (0.7)	36.6 (3.2)	47.6 (2.4)	12.5 (1.7)	1.0 (0.4)	61.1 (3.4)	13.5 (1.8)	1.7 (0.1)
FEMALE	1974	1285 (4%)	0.6 (0.2)	25.2 (1.8)	54.2 (1.9)	17.7 (1.3)	2.2 (0.5)	74.1 (1.8)	19.9 (1.5)	2.0 (0.0)
	1979	1374 (5%)	1.3 (0.4)	32.7 (1.8)*	51.0 (2.0)	13.5 (1.4)	1.4 (0.4)*	65.9 (1.9)*	15.0 (1.6)	1.8 (0.0)*
	1984	609 (7%)	1.2 (0.5)	25.7 (2.0)	52.5 (2.3)	17.5 (1.9)	3.2 (0.7)	73.1 (1.9)	20.7 (2.1)	2.0 (0.0)
OBSERVED ETHNICITY/RACE										
WHITE	1974	1982 (4%)	1.7 (0.4)	27.5 (1.7)	53.2 (1.6)*	15.6 (1.1)	1.9 (0.4)	70.8 (1.7)	17.6 (1.3)	1.9 (0.0)
	1979	2056 (7%)	1.2 (0.2)	36.5 (1.7)	48.7 (1.8)	12.3 (1.1)	1.3 (0.3)	62.3 (1.8)	13.6 (1.2)	1.8 (0.0)
	1984	946 (6%)	2.2 (0.6)	32.6 (2.3)	48.2 (1.5)	14.4 (1.5)	2.7 (0.5)	65.3 (2.5)	17.1 (1.8)	1.8 (0.0)
BLACK	1974	400 (11%)	5.8 (1.1)*	37.1 (3.4)*	47.5 (3.6)	8.7 (1.7)	0.8 (0.5)	57.1 (3.3)*	9.5 (1.7)	1.6 (0.0)*
	1979	505 (13%)	7.1 (1.8)*	39.9 (3.1)*	48.7 (3.3)	4.1 (1.1)*	0.3 (0.2)	53.1 (3.6)*	4.4 (1.1)*	1.5 (0.1)*
	1984	165 (22%)!	0.6 (0.5)	24.1 (2.5)	58.3 (4.3)	17.0 (3.7)	0.0 (0.0)	75.3 (2.5)	17.0 (3.7)	1.9 (0.0)
HISPANIC	1974	100 (20%)!	1.9 (1.3)	31.1 (4.5)	61.3 (4.2)	5.6 (2.3)	0.0 (0.0)	67.0 (5.4)	5.6 (2.3)	1.7 (0.1)
	1979	148 (26%)!	4.2 (2.1)	37.5 (3.6)	51.7 (3.5)	6.6 (3.4)	0.0 (0.0)	58.3 (3.0)	6.6 (3.4)	1.6 (0.1)
	1984	145 (34%)!	1.2 (0.9)	33.2 (6.5)	51.5 (8.4)	14.1 (3.9)	0.0 (0.0)	65.7 (6.6)	14.1 (3.9)	1.8 (0.1)

HOLE IN THE BOX: HOLISTIC SCORE

		(0)	(1)	(2)	(3)	(4)	(5)	(6)	(4,5,6)	MEAN
—TOTAL—	1974	1.3 (0.3)	11.4 (1.2)	20.4 (1.2)*	26.1 (1.1)	24.1 (1.3)*	10.4 (0.8)*	6.3 (0.8)	40.8 (2.0)*	3.2 (0.1)
	1979	1.4 (0.2)	14.0 (1.2)	25.7 (1.6)	26.7 (0.9)	20.2 (1.2)	8.4 (1.2)	3.7 (0.6)	32.3 (2.3)	2.9 (0.1)
	1984	1.4 (0.4)	11.3 (1.4)	27.2 (1.6)	29.3 (1.1)	18.4 (1.7)	7.0 (0.8)	5.4 (1.0)	30.7 (2.7)	2.9 (0.1)
SEX										
MALE	1974	2.5 (0.6)	16.3 (1.6)	24.5 (1.5)*	25.8 (1.6)	21.5 (1.7)	5.8 (0.9)	3.6 (0.6)	30.9 (2.1)	2.8 (0.1)
	1979	2.2 (0.4)	19.0 (1.4)	32.8 (1.6)	25.3 (1.7)	13.7 (1.2)	5.0 (1.0)	2.1 (0.5)	20.7 (2.1)	2.5 (0.1)
	1984	1.9 (0.6)	15.8 (2.3)	32.1 (2.3)	26.6 (1.7)	15.3 (2.2)	4.9 (0.9)	3.4 (1.1)	23.6 (3.5)	2.7 (0.1)
FEMALE	1974	0.2 (0.1)	6.8 (1.1)	16.5 (1.3)	26.5 (1.7)	26.6 (1.4)	14.7 (1.1)*	8.9 (1.2)	50.1 (2.5)*	3.5 (0.1)
	1979	0.6 (0.2)	8.7 (1.2)	18.3 (2.3)	28.0 (1.1)	27.0 (1.7)	12.1 (1.9)	5.3 (0.9)	44.4 (3.0)	3.3 (0.1)
	1984	0.8 (0.4)	6.2 (1.1)	21.6 (2.1)	32.5 (2.4)	21.9 (1.8)	9.3 (1.1)	7.8 (1.5)	38.9 (2.8)	3.3 (0.1)
OBSERVED ETHNICITY/RACE										
WHITE	1974	0.9 (0.4)	9.1 (1.2)	18.5 (1.3)*	26.5 (1.2)	25.8 (1.4)*	11.8 (0.9)*	7.4 (0.9)	45.1 (2.2)*	3.3 (0.1)*
	1979	0.8 (0.2)	12.0 (1.1)	23.4 (1.7)	27.3 (1.0)	22.7 (1.1)*	9.4 (1.3)	4.3 (0.8)	36.4 (2.5)	3.0 (0.1)
	1984	1.8 (0.5)	10.2 (1.4)	27.4 (1.8)	28.7 (1.4)	17.9 (1.8)	7.6 (1.1)	6.5 (1.2)	32.0 (2.8)	3.0 (0.1)
BLACK	1974	4.1 (1.0)*	25.4 (3.8)*	29.5 (2.5)	23.7 (4.1)	12.6 (2.0)	3.4 (0.9)	1.2 (0.6)	17.2 (2.5)	2.3 (0.1)*
	1979	3.5 (1.1)*	19.9 (2.5)	34.8 (2.3)	25.0 (1.9)	12.0 (1.7)	4.6 (1.0)	0.4 (0.3)	16.9 (1.8)	2.4 (0.1)
	1984!	0.0 (0.0)	11.5 (2.9)	31.8 (4.2)	35.3 (4.7)	16.4 (3.9)	2.6 (1.2)	2.4 (1.7)	21.4 (5.9)	2.7 (0.2)
HISPANIC	1974!	1.2 (1.2)	13.4 (3.8)	31.3 (4.9)	19.7 (4.2)	26.9 (7.4)	5.3 (2.7)	2.2 (1.4)	34.4 (8.2)	2.8 (0.2)
	1979!	3.6 (2.0)	22.1 (2.5)	38.9 (5.0)*	22.4 (2.7)	6.2 (2.2)*	5.7 (2.4)	1.1 (0.8)	13.0 (3.8)*	2.3 (0.1)
	1984!	0.4 (0.4)	21.6 (6.4)	20.5 (2.1)	28.8 (5.1)	20.7 (5.0)	7.4 (1.6)	0.6 (0.5)	28.7 (5.6)	2.7 (0.2)

Age 17

MEANS, PERCENTAGES, AND JACKKNIFED STANDARD ERRORS FOR PRIMARY TRAIT AND HOLISTIC SCORES

DALI: PRIMARY TRAIT SCORE

		N (C.V.)	Non-Rateable (0)	Unsatisfactory (1)	Minimal (2)	Adequate (3)	Elaborated (4)	Minimal or Better (2,3,4)	Adequate or Better (3,4)	MEAN
—TOTAL—	1979	2433 (6%)	0.6 (0.2)	12.4 (1.1)	60.4 (1.9)*	26.0 (1.8)*	0.7 (0.3)*	87.1 (1.3)	26.7 (1.8)*	2.1 (0.0)*
	1984	1539 (6%)	1.6 (0.6)	9.4 (1.1)	50.8 (2.6)	36.2 (2.8)	2.0 (0.5)	89.0 (1.2)	38.2 (3.1)	2.3 (0.0)
SEX										
MALE	1979	1161 (7%)	1.1 (0.5)	17.3 (1.5)*	62.0 (2.1)	19.2 (1.8)*	0.4 (0.2)	81.6 (1.8)*	19.6 (1.8)*	2.0 (0.0)*
	1984	791 (6%)	2.1 (0.7)	10.5 (1.3)	54.3 (3.3)	32.0 (3.3)	1.2 (0.4)	87.4 (1.3)	33.1 (3.5)	2.2 (0.0)
FEMALE	1979	1272 (7%)	0.1 (0.1)	8.1 (1.2)	58.9 (2.3)*	31.8 (2.4)*	1.1 (0.5)	91.8 (1.2)	32.9 (2.4)*	2.3 (0.0)
	1984	748 (7%)	1.1 (0.7)	8.1 (1.4)	47.0 (2.6)	40.8 (3.1)	2.9 (0.8)	90.7 (1.8)	43.7 (3.5)	2.4 (0.1)
OBSERVED ETHNICITY/RACE										
WHITE	1979	1917 (5%)	0.5 (0.2)	10.1 (0.8)	60.4 (1.9)*	28.2 (1.7)*	0.9 (0.3)*	89.4 (0.9)	29.1 (1.7)*	2.2 (0.0)*
	1984	1108 (7%)	1.3 (0.5)	7.5 (1.1)	47.9 (3.0)	41.0 (2.9)	2.5 (0.6)	91.3 (1.3)	43.4 (3.3)	2.4 (0.0)
BLACK	1979	341 (16%)	1.3 (0.5)	25.9 (4.1)	63.2 (4.5)	9.3 (2.7)*	0.3 (0.3)	72.8 (4.4)	9.6 (2.8)*	1.8 (0.1)
	1984	254 (20%)	2.7 (1.1)	17.8 (2.4)	61.8 (3.8)	17.7 (3.0)	0.0 (0.0)	79.5 (2.7)	17.7 (3.0)	1.9 (0.0)
HISPANIC	1979	108 (28%)†	0.5 (0.5)	21.4 (4.7)	53.2 (4.8)	24.9 (6.3)	0.0 (0.0)	78.1 (4.7)	24.9 (6.3)	2.0 (0.1)
	1984	142 (25%)†	0.6 (0.6)	13.3 (3.6)	60.3 (5.7)	24.9 (5.2)	0.9 (0.9)	86.1 (3.6)	25.8 (5.6)	2.1 (0.1)

DALI: HOLISTIC SCORE

		(0)	(1)	(2)	(3)	(4)	(5)	(6)	(4,5,6)	MEAN
—TOTAL—	1979	0.5 (0.2)	5.5 (1.1)	14.8 (1.2)	29.9 (1.3)	32.3 (1.3)	13.2 (1.0)*	3.8 (0.7)	49.3 (2.1)	3.4 (0.1)
	1984	1.2 (0.5)	3.7 (0.6)	13.9 (1.2)	27.2 (1.2)	31.4 (1.2)	17.3 (1.4)	5.3 (0.8)	54.0 (2.0)	3.6 (0.1)
SEX										
MALE	1979	0.9 (0.4)	9.5 (1.7)*	20.6 (1.6)	32.2 (1.8)	26.3 (1.7)	8.5 (1.1)*	2.0 (0.6)*	36.8 (2.4)*	3.1 (0.1)*
	1984	1.3 (0.5)	5.0 (0.8)	16.4 (2.1)	31.0 (1.5)	28.4 (1.6)	13.5 (1.2)	4.3 (0.8)	46.2 (2.5)	3.4 (0.1)
FEMALE	1979	0.1 (0.0)	2.1 (0.6)	9.8 (1.3)	27.8 (1.5)	37.6 (1.7)	17.2 (1.3)	5.4 (1.1)	60.2 (2.5)	3.7 (0.1)
	1984	1.1 (0.7)	2.2 (0.6)	11.1 (1.2)	23.1 (1.9)	34.6 (1.9)	21.5 (2.0)	6.4 (1.3)	62.5 (2.2)	3.8 (0.1)
OBSERVED ETHNICITY/RACE										
WHITE	1979	0.4 (0.2)	4.0 (0.6)*	13.3 (1.2)	30.0 (1.2)*	34.2 (1.3)	14.0 (1.1)*	4.0 (0.6)	52.2 (1.9)*	3.5 (0.1)*
	1984	1.0 (0.4)	2.5 (0.5)	10.8 (1.1)	26.1 (1.4)	33.9 (1.4)	19.7 (1.5)	6.2 (1.0)	59.7 (2.0)	3.7 (0.1)
BLACK	1979	0.7 (0.3)	17.3 (4.6)	24.3 (2.6)	29.8 (3.2)	20.6 (2.9)	5.5 (2.0)	1.8 (1.3)	27.9 (5.2)	2.8 (0.2)
	1984	2.1 (1.1)	8.3 (2.3)	26.8 (3.5)	32.2 (2.8)	23.2 (2.6)	5.5 (1.7)	1.8 (0.9)	30.5 (3.0)	2.9 (0.1)
HISPANIC	1979†	1.0 (1.0)	3.0 (1.3)	22.2 (5.0)	28.6 (6.0)	29.9 (5.9)	10.8 (2.8)	4.6 (3.1)	45.3 (6.3)	3.3 (0.1)
	1984†	0.6 (0.6)	5.1 (2.5)	20.0 (3.5)	31.1 (4.3)	26.4 (3.2)	14.7 (3.2)	2.3 (1.9)	43.3 (5.6)	3.3 (0.2)

SPLIT SESSION: PRIMARY TRAIT SCORE

		N (C.V.)	Non-Rateable (0)	Unsatisfactory (1)	Minimal (2)	Adequate (3)	Elaborated (4)	Minimal or Better (2,3,4)	Adequate or Better (3,4)	MEAN
—TOTAL—	1979	2742 (6%)	1.4 (0.3)	38.0 (1.6)	47.5 (1.4)	12.7 (0.9)*	0.4 (0.1)	60.6 (1.5)	13.1 (0.9)*	1.7 (0.0)*
	1984	1540 (6%)	1.9 (0.4)	34.3 (2.3)	44.3 (1.7)	18.8 (1.7)	0.8 (0.3)	63.8 (2.3)	19.5 (1.8)	1.8 (0.0)
SEX										
MALE	1979	1333 (7%)	2.3 (0.5)	39.0 (1.8)	48.1 (1.6)	10.3 (0.9)*	0.4 (0.2)	58.7 (1.9)	10.6 (0.9)*	1.7 (0.0)*
	1984	791 (6%)	3.0 (0.5)	34.7 (2.1)	45.3 (2.0)	16.6 (1.7)	0.4 (0.3)	62.3 (2.2)	17.0 (1.7)	1.8 (0.0)
FEMALE	1979	1409 (6%)	0.5 (0.2)	37.1 (2.0)	46.9 (2.1)	15.1 (1.4)*	0.5 (0.2)	62.4 (2.0)	15.5 (1.5)*	1.8 (0.0)
	1984	749 (7%)	0.7 (0.3)	33.9 (3.3)	43.2 (2.5)	21.1 (2.2)	1.1 (0.4)	65.4 (3.3)	22.2 (2.3)	1.9 (0.1)
OBSERVED ETHNICITY/RACE										
WHITE	1979	2066 (7%)	1.2 (0.3)	36.0 (1.7)	48.8 (1.5)	13.5 (1.0)*	0.5 (0.1)	62.7 (1.6)	13.9 (1.1)*	1.8 (0.0)*
	1984	1108 (7%)	1.7 (0.4)	31.1 (2.4)	46.2 (2.0)	20.2 (2.0)	0.8 (0.3)	67.2 (2.4)	21.0 (2.0)	1.9 (0.0)
BLACK	1979	466 (11%)	2.4 (1.0)	45.1 (3.7)	44.3 (3.5)	8.0 (1.8)*	0.2 (0.2)	52.5 (4.3)	8.2 (1.9)*	1.6 (0.1)
	1984	254 (20%)	3.9 (1.4)	40.4 (3.3)	39.8 (3.3)	15.4 (2.5)	0.4 (0.4)	55.7 (3.5)	15.8 (2.4)	1.7 (0.1)
HISPANIC	1979	133 (20%)	2.3 (1.3)	51.4 (6.9)	34.9 (7.2)	11.4 (3.3)	0.0 (0.0)	46.3 (6.8)	11.4 (3.3)	1.6 (0.1)
	1984	142 (25%)†	0.0 (0.0)	47.1 (5.9)	39.5 (5.1)	12.2 (3.3)	1.2 (1.3)	52.9 (5.9)	13.4 (3.5)	1.7 (0.1)

*SIGNIFICANTLY DIFFERENT FROM 1984
(ALPHA = .05 FOR THE COMPARISON WITHIN EACH COLUMN)
†INTERPRET WITH CAUTION. STANDARD ERRORS ARE POORLY ESTIMATED

Age 17

MEANS, PERCENTAGES, AND JACKKNIFED STANDARD ERRORS FOR PRIMARY TRAIT AND HOLISTIC SCORES

SPLIT SESSION: HOLISTIC SCORE

		(0)	(1)	(2)	(3)	(4)	(5)	(6)	(4,5,6)	MEAN
—TOTAL—	1979	1.1 (0.3)	6.1 (0.6)*	20.8 (1.2)*	31.4 (1.2)	27.5 (1.4)	10.5 (1.0)*	2.7 (0.5)*	40.6 (2.1)*	3.2 (0.0)*
	1984	0.8 (0.2)	3.5 (0.6)	12.0 (0.9)	29.6 (1.3)	30.9 (1.4)	17.9 (1.3)	5.4 (0.8)	54.2 (1.9)	3.6 (0.1)
SEX										
MALE	1979	1.7 (0.5)	9.2 (1.1)*	27.8 (1.6)*	31.1 (1.3)*	22.0 (1.5)*	6.5 (0.9)*	1.7 (0.5)	30.2 (2.1)*	2.9 (0.1)*
	1984	1.2 (0.4)	5.3 (0.9)	15.3 (1.2)	36.0 (1.9)	27.3 (1.8)	11.6 (1.2)	3.3 (1.0)	42.2 (2.2)	3.3 (0.1)
FEMALE	1979	0.5 (0.2)	3.0 (0.5)*	13.9 (1.5)*	31.8 (1.9)*	32.8 (1.7)	14.4 (1.3)*	3.6 (0.6)*	50.9 (2.6)*	3.5 (0.1)*
	1984	0.4 (0.2)	1.5 (0.5)	8.5 (1.2)	22.5 (1.7)	34.8 (2.0)	24.7 (2.1)	7.6 (1.1)	67.1 (2.3)	3.9 (0.1)
OBSERVED ETHNICITY/RACE										
WHITE	1979	1.0 (0.3)	5.5 (0.7)*	19.1 (1.1)*	30.7 (1.4)	29.0 (1.4)	11.7 (1.1)*	3.0 (0.6)*	43.7 (2.1)*	3.3 (0.1)*
	1984	0.5 (0.2)	2.8 (0.4)	10.2 (0.9)	28.0 (1.5)	32.2 (1.5)	20.1 (1.4)	6.3 (1.0)	58.6 (1.8)	3.7 (0.1)
BLACK	1979	2.0 (1.0)	8.8 (1.1)	31.7 (3.2)*	36.5 (2.7)	16.7 (2.1)*	4.0 (1.1)	0.3 (0.3)	21.0 (2.8)*	2.7 (0.1)*
	1984	3.2 (1.2)	6.7 (2.7)	19.5 (2.3)	34.6 (3.5)	27.5 (4.3)	5.9 (1.2)	2.6 (1.2)	36.0 (5.4)	3.0 (0.1)
HISPANIC	1979	1.7 (0.9)	8.0 (3.5)	24.7 (4.7)	31.4 (4.6)	26.1 (4.9)	6.0 (2.8)*	2.2 (2.0)	34.3 (7.2)	3.0 (0.2)
	1984!	0.0 (0.0)	4.6 (1.8)	16.0 (3.9)	32.0 (4.1)	23.0 (3.6)	21.9 (5.9)	2.5 (1.9)	47.4 (4.9)	3.5 (0.2)

HOLE IN THE BOX: PRIMARY TRAIT SCORE

		N (C.V.)	Non-Rateable (0)	Unsatisfactory (1)	Minimal (2)	Adequate (3)	Elaborated (4)	Minimal or Better (2,3,4)	Adequate or Better (3,4)	MEAN
—TOTAL—	1974	2246 (5%)	1.5 (0.3)	22.2 (1.1)	48.5 (1.5)	25.4 (1.4)	2.4 (0.5)	76.4 (1.2)	27.8 (1.5)	2.1 (0.0)
	1979	2688 (5%)	2.6 (0.3)	26.1 (0.9)*	45.3 (1.3)*	23.6 (1.3)	2.5 (0.5)	71.3 (0.9)	26.1 (1.5)	2.0 (0.0)
	1984	1534 (4%)	3.2 (1.0)	21.7 (1.4)	51.0 (1.6)	21.9 (1.9)	2.2 (0.4)	75.1 (2.1)	24.1 (1.7)	2.0 (0.0)
SEX										
MALE	1974	1067 (6%)	2.2 (0.5)	25.6 (1.5)	52.2 (2.0)	18.6 (1.7)	1.4 (0.4)	72.1 (1.7)	20.0 (1.8)	1.9 (0.0)
	1979	1318 (6%)	4.1 (0.6)	29.9 (1.4)*	48.4 (1.8)	15.7 (1.5)	1.8 (0.5)	66.0 (1.4)	17.6 (1.8)	1.8 (0.0)
	1984	745 (4%)	5.4 (1.4)	23.9 (2.1)	52.0 (2.4)	16.3 (2.0)	2.3 (0.7)	70.6 (2.7)	18.6 (1.8)	1.9 (0.0)
FEMALE	1974	1179 (6%)	0.8 (0.2)	19.1 (1.3)	45.3 (1.9)	31.6 (1.8)	3.2 (0.8)	80.1 (1.4)	34.8 (1.9)	2.2 (0.0)
	1979	1370 (4%)	1.0 (0.3)	22.3 (1.0)	42.1 (1.5)*	31.5 (1.6)	3.1 (0.7)	76.7 (1.0)	34.6 (1.8)	2.1 (0.0)
	1984	789 (5%)	1.0 (0.7)	19.5 (2.0)	50.0 (2.2)	27.3 (2.0)	2.1 (0.4)	79.5 (2.5)	29.5 (2.1)	2.1 (0.0)
OBSERVED ETHNICITY/RACE										
WHITE	1974	1870 (6%)	1.3 (0.3)	21.1 (1.1)	48.8 (1.7)	26.4 (1.5)	2.4 (0.4)	77.6 (1.2)	28.9 (1.6)	2.1 (0.0)
	1979	2124 (6%)	2.3 (0.3)	25.2 (0.9)*	44.7 (1.4)	25.3 (1.4)	2.5 (0.5)	72.5 (1.0)	27.8 (1.6)	2.0 (0.0)
	1984	1170 (4%)	3.3 (1.0)	20.3 (1.6)	49.6 (1.9)	24.4 (2.1)	2.4 (0.4)	76.4 (2.3)	26.8 (2.0)	2.0 (0.0)
BLACK	1974	305 (12%)	2.1 (0.8)	27.7 (4.0)	51.2 (3.7)	18.2 (3.4)	0.8 (0.5)	70.3 (4.4)	19.0 (3.3)	1.9 (0.1)
	1979	382 (14%)	3.3 (1.1)	32.0 (2.5)	50.9 (2.7)	12.6 (2.5)	1.2 (0.7)	64.7 (2.6)	13.8 (2.6)	1.8 (0.1)
	1984	194 (21%)!	2.1 (1.7)	29.5 (4.1)	53.8 (4.0)	13.3 (2.6)	1.3 (1.0)	68.4 (4.3)	14.7 (2.7)	1.8 (0.1)
HISPANIC	1974	53 (26%)!	4.6 (3.1)	27.7 (6.5)	39.2 (5.7)*	22.6 (6.7)	6.0 (6.0)	67.8 (6.3)	28.5 (4.8)	2.0 (0.1)
	1979	113 (27%)!	10.5 (4.8)	34.3 (6.0)	36.9 (6.4)*	17.4 (4.0)	0.9 (0.6)	55.2 (8.1)*	18.3 (4.0)	1.6 (0.1)
	1984	139 (27%)!	3.9 (1.5)	19.9 (2.5)	60.9 (3.6)	12.4 (4.1)	2.9 (1.8)	76.2 (3.3)	15.3 (4.4)	1.9 (0.1)

HOLE IN THE BOX: HOLISTIC SCORE

		(0)	(1)	(2)	(3)	(4)	(5)	(6)	(4,5,6)	MEAN
—TOTAL—	1974	0.9 (0.2)	3.1 (0.4)	9.7 (0.9)	26.2 (0.9)	34.0 (1.4)*	17.7 (1.0)	8.4 (0.9)	60.1 (1.4)	3.8 (0.0)
	1979	1.9 (0.3)	6.6 (0.6)	14.6 (0.9)	26.7 (1.1)	28.3 (1.3)	15.7 (1.1)	6.1 (0.7)*	50.1 (1.8)	3.4 (0.1)
	1984	2.3 (0.9)	4.6 (0.8)	12.4 (1.1)	24.9 (1.3)	28.8 (1.6)	18.3 (1.7)	8.8 (0.8)	55.9 (2.4)	3.6 (0.1)
SEX										
MALE	1974	1.6 (0.5)	5.3 (0.8)	13.3 (1.4)	31.0 (1.6)	31.2 (1.8)*	13.1 (1.5)	4.6 (0.6)	48.8 (1.8)	3.4 (0.0)
	1979	3.1 (0.6)	11.0 (0.9)	19.8 (1.2)	27.0 (1.3)	23.6 (1.6)	11.0 (1.4)	4.4 (0.7)	39.1 (2.3)	3.1 (0.1)
	1984	3.6 (1.2)	8.1 (1.4)	17.3 (1.8)	26.1 (2.0)	23.8 (2.0)	15.6 (2.1)	5.5 (0.8)	44.9 (3.3)	3.3 (0.1)
FEMALE	1974	0.2 (0.1)	1.3 (0.4)	6.5 (0.9)	21.9 (1.3)	36.4 (2.2)	21.8 (1.7)	11.8 (1.6)	70.1 (1.8)	4.1 (0.1)
	1979	0.7 (0.3)	2.2 (0.4)	9.4 (1.1)	26.4 (1.3)	33.0 (1.4)	20.3 (1.3)	7.9 (0.9)*	61.2 (1.5)	3.8 (0.0)
	1984	1.0 (0.7)	1.2 (0.5)	7.6 (0.9)	23.6 (1.9)	33.7 (2.2)	20.9 (2.0)	11.9 (1.3)	66.6 (2.6)	4.0 (0.1)
OBSERVED ETHNICITY/RACE										
WHITE	1974	0.8 (0.2)	2.2 (0.3)	8.4 (0.9)	25.3 (1.1)	35.5 (1.4)	19.0 (1.1)	8.8 (0.9)	63.3 (1.5)	3.8 (0.0)
	1979	1.5 (0.3)	5.6 (0.7)	13.5 (1.1)	26.0 (1.2)	29.3 (1.2)	17.2 (1.1)	6.9 (0.8)*	53.4 (1.8)*	3.6 (0.1)
	1984	2.2 (0.9)	4.1 (0.8)	10.5 (1.0)	22.8 (1.4)	30.7 (1.7)	19.5 (2.0)	10.2 (0.9)	60.4 (2.4)	3.7 (0.1)
BLACK	1974	1.1 (0.6)	8.7 (2.0)	19.0 (2.7)	33.3 (3.0)	24.7 (3.3)	9.7 (2.0)	3.3 (1.3)	37.8 (3.6)	3.1 (0.1)
	1979	2.7 (1.0)	12.5 (1.6)	22.6 (2.6)	33.4 (3.4)	20.9 (3.3)	5.9 (1.4)	2.1 (1.0)	28.9 (3.4)	2.8 (0.1)
	1984!	2.1 (1.7)	6.9 (2.7)	19.6 (3.2)	36.7 (3.5)	21.1 (4.2)	12.1 (2.7)	1.6 (1.0)	34.8 (4.9)	3.1 (0.1)
HISPANIC	1974!	2.9 (2.9)	7.4 (4.3)	11.4 (5.1)	31.6 (7.5)	22.8 (6.8)	9.1 (4.8)	14.8 (11.6)	46.7 (8.4)	3.5 (0.4)
	1979!	10.0 (4.8)	13.7 (5.1)	18.7 (3.6)	22.4 (3.6)	21.0 (4.2)	11.0 (3.6)	3.2 (1.2)	35.1 (5.2)	2.8 (0.3)
	1984!	2.8 (1.6)	6.5 (1.9)	17.9 (3.5)	28.0 (2.8)	21.7 (3.5)	16.1 (4.1)	7.0 (2.5)	44.8 (4.7)	3.4 (0.2)

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Age 13

PERCENTAGES AND JACKKNIFED STANDARD ERRORS FOR WRITING BACKGROUND EXERCISES (INCLUDES ALL BOOKLETS)

REPORTS WRITTEN LAST 6 WEEKS FOR SCHOOL

		N (C.V.)	0	1-2	3-4	5-10	MORE 10	MISSING	MEAN
—TOTAL—	1979	29430 (4%)	16.4 (0.8)	33.5 (0.8)	21.5 (0.5)	17.2 (0.6)	4.4 (0.3)*	7.0 (0.4)*	3.0 (0.1)
	1984	5158 (3%)	17.9 (1.1)	33.3 (1.2)	22.4 (0.9)	17.6 (1.2)	3.3 (0.4)	5.3 (0.4)	2.9 (0.1)
SEX									
MALE	1979	14575 (4%)	17.7 (0.9)	32.6 (0.8)	20.3 (0.6)	16.0 (0.7)	4.7 (0.3)*	8.7 (0.4)*	3.0 (0.1)
	1984	2629 (4%)	19.0 (1.3)	32.9 (1.3)	22.2 (1.1)	16.6 (1.3)	3.3 (0.4)	5.9 (0.5)	2.8 (0.1)
FEMALE	1979	14855 (4%)	15.2 (0.9)	34.4 (0.9)	22.7 (0.6)	18.4 (0.6)	4.1 (0.3)	5.2 (0.4)	3.1 (0.1)
	1984	2528 (4%)	16.7 (1.3)	33.8 (1.5)	22.5 (1.1)	19.1 (1.4)	3.3 (0.4)	4.6 (0.6)	3.0 (0.1)
OBSERVED ETHNICITY/RACE									
WHITE	1979	22027 (5%)	16.2 (0.9)	34.8 (0.8)	22.2 (0.5)	17.6 (0.7)	4.2 (0.3)	5.0 (0.2)	3.0 (0.1)
	1984	3742 (5%)	17.5 (1.2)	34.1 (1.2)	22.8 (1.0)	17.8 (1.4)	3.4 (0.4)	4.4 (0.4)	2.9 (0.1)
BLACK	1979	5259 (11%)	18.4 (1.2)	28.0 (1.4)	17.9 (0.9)*	14.6 (0.7)	5.3 (0.5)*	15.8 (1.0)*	3.0 (0.1)
	1984	833 (12%)	20.5 (1.8)	28.6 (2.3)	21.8 (1.8)	17.9 (2.2)	3.2 (0.6)	8.0 (1.0)	2.9 (0.2)
HISPANIC	1979	1440 (16%)	16.0 (1.1)	29.2 (2.7)	19.7 (1.1)	17.5 (0.9)	5.4 (0.6)*	12.2 (2.3)	3.2 (0.1)*
	1984	443 (23%)†	16.0 (3.6)	36.6 (3.9)	18.8 (1.9)	15.9 (2.3)	2.4 (1.1)	10.3 (1.4)	2.7 (0.2)

TIME SPENT IN ENGLISH CLASS ON WRITING INSTRUCTION

		N (C.V.)	NONE-LIT	1/3-MORE	MISSING
—TOTAL—	1979	29418 (4%)	44.0 (0.6)	55.1 (0.6)	0.9 (0.2)*
	1984	5158 (3%)	42.4 (1.1)	56.0 (1.1)	1.6 (0.3)
SEX					
MALE	1979	14568 (4%)	46.4 (0.7)	52.5 (0.7)	1.1 (0.2)
	1984	2629 (4%)	43.9 (1.4)	54.5 (1.4)	1.7 (0.3)
FEMALE	1979	14850 (4%)	41.6 (0.8)	57.8 (0.8)	0.7 (0.2)*
	1984	2528 (4%)	40.8 (1.1)	57.7 (1.2)	1.5 (0.4)
OBSERVED ETHNICITY/RACE					
WHITE	1979	22019 (5%)	44.7 (0.7)	54.6 (0.8)	0.7 (0.2)*
	1984	3742 (5%)	42.6 (1.4)	55.9 (1.4)	1.5 (0.3)
BLACK	1979	5255 (11%)	40.3 (1.0)	58.2 (1.0)	1.5 (0.3)
	1984	833 (12%)	43.1 (1.5)	54.9 (1.5)	2.0 (0.6)
HISPANIC	1979	1440 (16%)	43.8 (1.7)	54.3 (1.7)	1.9 (0.6)
	1984	443 (23%)†	40.7 (3.8)	57.3 (3.5)	2.0 (0.5)

TEACHER SUGGESTIONS ON PAPER

		N (C.V.)	USUALLY	SOMETIME	NEVER	MISSING
—TOTAL—	1979	29427 (4%)	24.0 (0.6)*	51.2 (0.5)*	15.9 (0.4)*	8.9 (0.4)*
	1984	5158 (3%)	33.1 (1.2)	47.0 (1.0)	19.0 (0.9)	1.0 (0.3)
SEX						
MALE	1979	14574 (4%)	25.0 (0.6)*	49.1 (0.6)*	15.0 (0.5)*	11.0 (0.5)*
	1984	2629 (4%)	34.2 (1.5)	44.5 (1.4)	20.3 (1.1)	1.1 (0.3)
FEMALE	1979	14853 (4%)	23.0 (0.7)*	53.3 (0.6)*	16.8 (0.5)	7.0 (0.4)*
	1984	2528 (4%)	31.9 (1.2)	49.6 (1.2)	17.6 (1.2)	0.9 (0.3)
OBSERVED ETHNICITY/RACE						
WHITE	1979	22025 (5%)	25.3 (0.7)*	52.6 (0.6)*	15.0 (0.5)*	7.1 (0.3)*
	1984	3742 (5%)	33.4 (1.4)	48.1 (1.2)	17.8 (0.9)	0.7 (0.3)
BLACK	1979	5258 (11%)	17.1 (0.8)*	43.3 (0.7)	20.2 (0.6)	19.5 (1.0)*
	1984	833 (12%)	32.1 (2.1)	42.0 (2.0)	24.3 (2.1)	1.6 (0.6)
HISPANIC	1979	1440 (16%)	19.5 (1.0)*	47.2 (1.5)	19.5 (1.1)	13.7 (1.3)*
	1984	443 (23%)†	31.0 (2.8)	45.9 (2.4)	20.8 (1.8)	2.2 (1.0)

*SIGNIFICANTLY DIFFERENT FROM 1984
(ALPHA = .05 FOR THE COMPARISON WITHIN EACH COLUMN)
†INTERPRET WITH CAUTION: STANDARD ERRORS ARE POORLY ESTIMATED

Age 13

PERCENTAGES AND JACKKNIFED STANDARD ERRORS FOR WRITING BACKGROUND EXERCISES (INCLUDES ALL BOOKLETS)

DRAFT REWRITE BEFORE TURNING IN

		N (C.V.)	USUALLY	SOMETIME	NEVER	MISSING
TOTAL	1979	29424 (4%)	38.1 (0.8)*	42.8 (0.4)*	13.0 (0.4)*	6.1 (0.3)*
	1984	5158 (3%)	46.4 (1.3)	36.7 (0.9)	15.9 (0.9)	1.0 (0.3)
SEX						
MALE	1979	14569 (4%)	30.7 (0.9)*	43.9 (0.6)*	17.8 (0.6)	7.6 (0.4)*
	1984	2629 (4%)	39.6 (1.6)	39.0 (1.3)	20.5 (1.3)	1.0 (0.3)
FEMALE	1979	14855 (4%)	45.4 (0.9)*	41.6 (0.5)*	8.4 (0.4)*	4.6 (0.3)*
	1984	2528 (4%)	53.6 (1.7)	34.3 (1.2)	11.0 (0.8)	1.1 (0.3)
OBSERVED ETHNICITY/RACE						
WHITE	1979	22021 (5%)	40.8 (0.8)*	42.2 (0.4)*	12.3 (0.5)*	4.7 (0.3)*
	1984	3742 (5%)	48.0 (1.4)	36.2 (1.0)	15.1 (1.0)	0.7 (0.3)
BLACK	1979	5259 (11%)	26.3 (0.8)*	43.0 (0.8)	17.2 (0.7)	13.6 (0.8)*
	1984	833 (12%)	38.6 (2.9)	38.8 (2.7)	20.5 (1.7)	2.2 (0.6)
HISPANIC	1979	1440 (16%)	28.0 (1.5)*	47.6 (1.5)*	14.7 (1.2)	9.7 (0.9)*
	1984	443 (23%)†	45.3 (2.1)	38.3 (2.3)	14.7 (2.0)	1.7 (0.8)

ENCOURAGED TO MAKE NOTES ON TOPIC OF PAPER

		N (C.V.)	USUALLY	SOMETIME	NEVER	MISSING
TOTAL	1979	29417 (4%)	40.9 (0.8)*	47.1 (0.5)*	11.0 (0.3)	1.0 (0.2)
	1984	5158 (3%)	47.1 (1.0)	42.5 (0.9)	9.8 (0.7)	0.6 (0.3)
SEX						
MALE	1979	14565 (4%)	37.2 (0.9)*	47.6 (0.6)*	13.9 (0.5)*	1.2 (0.2)*
	1984	2629 (4%)	42.8 (1.3)	44.9 (1.1)	11.7 (0.8)	0.6 (0.2)
FEMALE	1979	14852 (4%)	44.5 (0.8)*	46.6 (0.6)*	8.1 (0.3)	0.8 (0.2)
	1984	2528 (4%)	51.6 (1.3)	39.9 (1.2)	7.7 (0.7)	0.7 (0.3)
OBSERVED ETHNICITY/RACE						
WHITE	1979	22096 (5%)	42.7 (0.9)*	46.3 (0.6)*	10.1 (0.3)	0.8 (0.2)
	1984	3742 (5%)	47.9 (1.1)	42.0 (1.0)	9.6 (0.8)	0.5 (0.2)
BLACK	1979	5257 (11%)	33.7 (1.0)*	49.7 (0.8)*	14.5 (0.9)*	2.1 (0.3)
	1984	833 (12%)	46.6 (2.4)	42.2 (2.5)	10.0 (1.2)	1.2 (0.4)
HISPANIC	1979	1440 (16%)	30.8 (1.3)*	51.4 (1.3)	16.2 (1.5)	1.6 (0.4)
	1984	443 (23%)†	38.3 (3.3)	48.1 (3.2)	12.7 (2.6)	0.9 (0.5)

Age 17

PERCENTAGES AND JACKKNIFED STANDARD ERRORS FOR WRITING BACKGROUND EXERCISES (INCLUDES ALL BOOKLETS)

REPORTS WRITTEN LAST 6 WEEKS FOR SCHOOL

		N (C.V.)	0	1-2	3-4	5-10	MORE 10	MISSING	MEAN
—TOTAL—	1974	2237 (5%)	12.4 (0.9)*	25.8 (1.5)	24.9 (1.1)	27.0 (1.4)	8.5 (1.1)*	1.5 (0.4)*	4.0 (0.1)
	1979	26651 (4%)	13.8 (0.5)*	29.1 (0.7)	25.2 (0.5)	22.7 (0.7)*	5.8 (0.3)	3.5 (0.3)	3.5 (0.1)*
	1984	6209 (2%)	9.6 (0.6)	27.7 (1.0)	26.2 (0.6)	26.4 (1.2)	5.8 (0.4)	4.3 (0.7)	3.8 (0.1)
SEX									
MALE	1974	1061 (6%)	15.0 (1.3)*	26.7 (2.0)	23.6 (1.7)	25.0 (1.6)	8.1 (1.3)	1.6 (0.5)*	3.8 (0.2)
	1979	12849 (5%)	16.2 (0.6)*	28.8 (0.8)	24.6 (0.6)	20.4 (0.7)*	5.6 (0.3)	4.4 (0.3)	3.4 (0.1)*
	1984	3106 (3%)	11.4 (0.8)	28.2 (1.3)	26.1 (1.0)	24.0 (1.4)	5.7 (0.5)	4.7 (0.5)	3.7 (0.1)
FEMALE	1974	1176 (6%)	10.0 (1.1)	25.1 (1.7)	26.0 (1.3)	28.8 (2.0)	8.8 (1.2)	1.5 (0.5)	4.2 (0.1)
	1979	13802 (4%)	11.7 (0.6)*	29.4 (0.8)	25.7 (0.7)	24.7 (0.9)*	5.9 (0.5)	2.6 (0.3)	3.7 (0.1)*
	1984	3103 (3%)	7.7 (0.6)	27.2 (1.2)	26.4 (0.8)	28.9 (1.4)	5.9 (0.6)	3.9 (1.0)	4.0 (0.1)
OBSERVED ETHNICITY/RACE									
WHITE	1974	1861 (6%)	11.8 (1.0)	26.1 (1.6)	25.1 (1.3)	27.1 (1.3)	8.6 (1.3)	1.3 (0.4)*	4.0 (0.1)
	1979	21093 (5%)	13.6 (0.6)*	29.4 (0.8)	25.7 (0.6)	22.9 (0.8)*	5.7 (0.4)	2.7 (0.3)	3.6 (0.1)*
	1984	4585 (5%)	9.5 (0.7)	28.4 (1.2)	25.8 (0.7)	26.7 (1.3)	6.2 (0.4)	3.5 (0.7)	3.9 (0.1)
BLACK	1974	305 (12%)	15.7 (2.9)	19.4 (2.6)	24.9 (2.8)	29.0 (4.1)	8.2 (2.0)	2.8 (0.9)	4.2 (0.4)
	1979	3807 (10%)	15.8 (1.0)*	27.5 (0.8)	22.7 (1.0)*	20.4 (0.8)*	5.2 (0.6)	8.4 (0.7)	3.4 (0.1)
	1984	977 (15%)	11.3 (1.5)	26.1 (1.9)	27.6 (1.9)	25.4 (2.0)	4.2 (0.8)	5.4 (1.1)	3.7 (0.2)
HISPANIC	1974	53 (26%)†	9.2 (5.3)	39.7 (11.2)	21.9 (5.0)	20.5 (11.0)	6.0 (3.4)	2.7 (2.8)	3.3 (0.5)
	1979	1127 (17%)	15.7 (1.4)*	32.2 (1.5)	21.3 (1.6)	19.5 (1.5)	6.4 (1.3)	5.0 (0.6)	3.3 (0.2)
	1984	499 (24%)†	8.5 (2.1)	26.5 (2.4)	25.8 (2.2)	25.0 (4.6)	4.2 (1.1)	10.0 (4.5)	3.9 (0.3)

TIME SPENT IN ENGLISH CLASS ON WRITING INSTRUCTION

		N (C.V.)	NONE-LIT	1/3-MORE	MISSING
—TOTAL—	1974	2237 (5%)	47.6 (1.5)*	52.1 (1.5)*	0.3 (0.1)*
	1979	26631 (4%)	37.4 (0.7)	61.5 (0.9)	1.1 (0.4)*
	1984	6209 (2%)	35.1 (1.3)	61.9 (1.3)	2.9 (0.7)
SEX					
MALE	1974	1061 (6%)	50.6 (1.9)*	48.9 (1.9)*	0.5 (0.3)*
	1979	12835 (5%)	39.4 (0.9)	59.3 (1.0)	1.3 (0.3)*
	1984	3106 (3%)	36.9 (1.6)	60.3 (1.6)	2.8 (0.6)
FEMALE	1974	1176 (6%)	45.0 (2.1)*	55.0 (2.1)*	0.0 (0.0)*
	1979	13796 (4%)	35.5 (0.8)	63.6 (0.9)	1.0 (0.4)
	1984	3103 (3%)	33.3 (1.4)	63.5 (1.6)	3.1 (0.9)
OBSERVED ETHNICITY/RACE					
WHITE	1974	1861 (6%)	49.5 (1.5)*	50.4 (1.5)*	0.1 (0.1)*
	1979	21078 (5%)	38.5 (0.8)	60.4 (0.9)	1.1 (0.4)
	1984	4585 (5%)	37.1 (1.5)	60.3 (1.5)	2.6 (0.8)
BLACK	1974	305 (12%)	36.6 (3.3)*	62.8 (3.4)	0.6 (0.5)
	1979	3803 (10%)	31.0 (1.0)	67.8 (1.1)	1.2 (0.3)
	1984	977 (15%)	27.5 (1.6)	69.3 (1.8)	3.2 (1.1)
HISPANIC	1974	53 (26%)†	37.5 (11.7)	59.6 (12.1)	2.9 (2.9)
	1979	1126 (18%)	34.2 (1.4)	64.5 (1.7)	1.3 (0.5)
	1984	499 (24%)†	28.0 (3.2)	66.0 (3.1)	6.0 (5.0)

DRAFT/REWRITE BEFORE TURNING IN

		N (C.V.)	USUALLY	SOMETIME	NEVER	MISSING
—TOTAL—	1974	2237 (5%)	54.4 (1.3)*	40.1 (1.3)*	5.2 (0.6)*	0.2 (0.1)*
	1979	26645 (4%)	51.0 (0.8)*	32.5 (0.5)	6.9 (0.3)	9.5 (0.5)*
	1984	6209 (2%)	58.7 (1.1)	31.1 (0.8)	7.6 (0.4)	2.7 (0.8)
SEX						
MALE	1974	1061 (6%)	43.2 (1.7)*	47.4 (1.9)*	8.9 (1.0)	0.5 (0.3)*
	1979	12844 (5%)	41.6 (0.9)*	36.3 (0.5)	10.6 (0.4)	11.4 (0.6)*
	1984	3106 (3%)	52.2 (1.4)	35.0 (1.1)	10.3 (0.8)	2.4 (0.6)
FEMALE	1974	1176 (6%)	64.5 (1.6)	33.6 (1.6)*	1.9 (0.4)*	0.0 (0.0)*
	1979	13801 (4%)	59.7 (0.9)*	29.1 (0.7)	3.5 (0.2)*	7.7 (0.5)*
	1984	3103 (3%)	65.5 (1.2)	26.9 (1.2)	4.6 (0.4)	3.0 (1.0)
OBSERVED ETHNICITY/RACE						
WHITE	1974	1861 (6%)	55.6 (1.4)*	39.5 (1.5)*	4.8 (0.6)*	0.1 (0.1)*
	1979	21089 (5%)	53.7 (0.9)*	31.6 (0.6)	6.8 (0.3)	7.9 (0.5)*
	1984	4585 (5%)	60.1 (1.0)	30.3 (0.9)	7.4 (0.5)	2.3 (0.8)
BLACK	1974	305 (12%)	45.9 (2.9)	46.8 (2.6)*	6.8 (1.7)	0.5 (0.5)
	1979	3807 (10%)	35.1 (1.4)*	37.0 (1.1)	8.3 (0.8)	19.6 (1.2)*
	1984	977 (15%)	53.4 (2.4)	34.8 (1.9)	8.8 (1.2)	3.0 (1.1)
HISPANIC	1974	53 (26%)†	47.1 (6.5)	41.5 (5.0)	8.4 (5.3)	2.9 (2.9)
	1979	1126 (17%)	39.3 (2.9)*	37.4 (2.0)	7.1 (1.1)	16.3 (1.9)
	1984	499 (24%)†	54.1 (5.1)	32.1 (4.2)	7.7 (1.8)	6.1 (4.9)

Age 17

PERCENTAGES AND JACKKNIFED STANDARD ERRORS FOR WRITING BACKGROUND EXERCISES (INCLUDES ALL BOOKLETS)

TEACHER SUGGESTIONS ON PAPER

		N (C.V.)	USUALLY	SOMETIME	NEVER	MISSING
TOTAL	1974	2237 (5%)	31.5 (1.3)*	58.5 (1.3)*	9.8 (0.8)*	0.2 (0.1)*
	1979	26644 (4%)	42.2 (1.0)*	38.6 (0.6)*	6.7 (0.3)	12.5 (0.7)*
	1984	6209 (2%)	56.3 (1.1)	33.7 (0.8)	7.3 (0.6)	2.7 (0.8)
SEX						
MALE	1974	1061 (6%)	35.2 (1.6)*	54.7 (1.8)*	9.7 (1.2)	0.5 (0.3)*
	1979	12842 (5%)	41.4 (1.0)*	35.9 (0.6)*	7.9 (0.4)	14.9 (0.8)*
	1984	3106 (3%)	56.0 (1.5)	33.2 (1.0)	8.4 (0.8)	2.4 (0.6)
FEMALE	1974	1176 (6%)	28.2 (1.7)*	62.0 (2.1)*	9.8 (1.1)*	0.0 (0.0)*
	1979	13802 (4%)	43.0 (1.2)*	41.1 (0.9)*	5.6 (0.4)	10.4 (0.6)*
	1984	3103 (3%)	56.7 (1.3)	34.2 (1.3)	6.2 (0.6)	2.9 (1.0)
OBSERVED ETHNICITY/RACE						
WHITE	1974	1861 (6%)	32.0 (1.4)*	60.4 (1.5)*	7.5 (0.8)	0.1 (0.1)*
	1979	21087 (5%)	44.7 (1.1)*	38.7 (0.7)*	6.2 (0.3)	10.5 (0.6)*
	1984	4585 (5%)	58.5 (1.1)	32.6 (0.9)	6.7 (0.6)	2.3 (0.8)
BLACK	1974	305 (12%)	24.2 (2.6)*	49.2 (4.0)*	26.2 (4.2)*	0.5 (0.5)
	1979	3807 (10%)	29.1 (1.3)*	36.2 (1.1)	9.6 (0.8)	25.2 (1.5)*
	1984	977 (15%)	48.9 (2.1)	38.2 (1.9)	10.2 (1.3)	2.7 (1.0)
HISPANIC	1974	53 (26%)†	32.7 (9.1)	48.7 (6.8)	15.6 (6.7)	2.9 (2.9)
	1979	1126 (17%)	27.8 (2.7)*	40.5 (2.2)	10.9 (1.1)	20.9 (1.6)*
	1984	499 (24%)†	48.6 (4.2)	37.5 (3.2)	7.9 (2.1)	6.0 (5.0)

ENCOURAGED TO MAKE NOTES ON TOPIC OF PAPER

		N (C.V.)	USUALLY	SOMETIME	NEVER	MISSING
TOTAL	1979	26643 (4%)	54.5 (0.7)*	35.0 (0.5)*	7.6 (0.2)*	2.8 (0.4)
	1984	6209 (2%)	64.5 (0.9)	27.3 (0.8)	5.7 (0.4)	2.6 (0.8)
SEX						
MALE	1979	12841 (5%)	48.0 (0.8)*	38.0 (0.6)*	10.4 (0.3)*	3.5 (0.4)
	1984	3106 (3%)	60.6 (1.3)	29.5 (1.1)	7.6 (0.6)	2.2 (0.6)
FEMALE	1979	13802 (4%)	60.5 (0.8)*	32.3 (0.7)*	5.1 (0.2)*	2.2 (0.4)
	1984	3103 (3%)	68.5 (1.0)	24.9 (1.0)	3.6 (0.3)	2.9 (1.0)
OBSERVED ETHNICITY/RACE						
WHITE	1979	21086 (5%)	55.9 (0.7)*	34.1 (0.6)*	7.7 (0.2)*	2.4 (0.4)
	1984	4585 (5%)	68.2 (1.1)	26.5 (0.9)	6.1 (0.4)	2.2 (0.8)
BLACK	1979	3806 (10%)	48.0 (1.3)*	39.0 (1.0)*	7.4 (0.5)*	5.5 (0.5)*
	1984	977 (15%)	65.5 (2.3)	28.1 (1.7)	3.7 (0.6)	2.7 (1.0)
HISPANIC	1979	1127 (17%)	41.6 (2.0)*	44.1 (2.2)*	8.8 (1.3)*	5.5 (0.9)
	1984	499 (24%)†	56.0 (4.4)	33.1 (2.3)	5.0 (0.9)	6.0 (5.0)

*SIGNIFICANTLY DIFFERENT FROM 1984
(ALPHA = .05 FOR ALL PAIRWISE COMPARISONS WITHIN EACH COLUMN)
†INTERPRET WITH CAUTION. STANDARD ERRORS ARE POORLY ESTIMATED.

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